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UNIVERSITY OF ALBERTA

A POLITICAL DEMOGRAPHIC PERSPECTIVE OF DIFFERENTIAL FERTILITY IN BANGLADESH: ELITES VERSUS NON-ELITES

by

A. K. M. NURUN NABI

(C)

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

IN

DEMOGRAPHY

DEPARTMENT OF SOCIOLOGY

EDMONTON, ALBERTA

FALL 1991

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TO MY WIFE, GULNAHAR

without whose tremendous sacrifice I would not be where I am today.

ABSTRACT

This research presents an analysis of fertility differentials in Bangladesh in terms of the hierarchical structure of the society using Bangladesh Fertility Survey data. The study utilizes a political demographic perspective. A composite index of elitism has been constructed to create three broad hierarchical groups — non–elites, sub–elites and elites — in rural and urban areas by combining selected indicators — husband's education and occupational prestige, animal protein consumption, use of efficient contraception, and ownership of modern objects and cattle. The determinants included in the multiple regression model are duration of marriage, child mortality, proportion of sons ever born, Muslim religiosity, female education and labour force participation. Children ever born is the dependent variable.

In rural areas, elites have the lowest and non–elites the highest fertility; in urban areas, however, elites and non–elites have the same level, and sub–elites the highest fertility. In both rural and urban settings, elites have the highest rate of natural increase. Overall high fertility and growth rate among the elites in Bangladesh result from "religio–agrarian" culture, ineffective government policies and low level of socio–economic conditions, perpetuated by national and international political and economic terms and conditions.

Duration of marriage and child mortality are the most important determinants of fertility for all groups. Other factors also have significant bearings on fertility depending on group position. Proportion of sons ever born positively affects the fertility of both rural and urban non–elites and sub–elites, suggesting a preference for larger family regardless of gender. Rural and urban non–elites' fertility is positively affected by Muslim religiosity. Female labour force participation has a significant effect on the fertility of rural non–elites, and urban non–elites and sub–elites. Female education has a positive effect on rural non–elites' and negative effect on urban elites' fertility.

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Chapter 1

INTRODUCTION

A. Statement of the Problem

The study of differential fertility is important in comprehending the dynamics of human reproductive behaviour. Like any other social demographic process, fertility is determined by the different characteristics of individuals and regions of a society (as proposed by Davis and Blake, 1956). Recognizing the importance of differential fertility, researchers have attempted to conceptualize fertility for the sub-groups of population in Bangladesh, but those attempts have been inadequate, both methodologically and conceptually, in capturing the relationship between social groups and fertility. This study attempts to fill this gap by analysing the determinants of fertility for three social groups — non-elites, sub-elites and elites — in Bangladesh.

The country is experiencing a high rate of population growth mainly due to natural increase — high fertility and relatively low mortality. Data from the Bangladesh Bureau of Statistics (1984a, and 1984b) and the Population Reference Bureau (1989) show that the crude birth rate of 47.4 in 1974 fell to 34.6 in 1981, but rose to 43 in 1989. The crude death rate of 19.4 in 1974 declined to 11.5 in 1981, but increased to 15 in 1989. Both vital rates are high when compared to the developed nations and many less developed countries. In Bangladesh, the gap between fertility and mortality is so large that it generates an explosive rate of population growth.

Historically, the region of Bangladesh, India and Pakistan had a substantial population, but with almost a stationary growth rate. After reviewing archeological, literary and historical sources, Davis (1951:24) suggested two reasons for a substantial population in this region before the Christian era: first, an advanced technology, particularly in agriculture and cottage industries; and second, a fertile environment for the application of this advanced technology, conducive to significant developments in different areas of the economy. Obaidullah (n. d:23-24) has estimated a population of 17 million in 1700 for Bangladesh. In 1750, it increased to 19 million. After the famine in 1770, the

total population decreased to 15 million, and slowly increased to about 17 million by 1800. These suggest that the population would tend to grow slightly in "normal times", and the growth rate would reach a stationary state due to natural catastrophies (Davis, 1951:24).

With the tremendous achievements in the development of medical and nutrition sciences and increasing awareness of health and hygiene, the death rate has declined rapidly, while the birth rate remained high. This imbalance in the two population components triggered a population explosion. The rapid acceleration started in the 1930s. While the population of 17 million in 1700 took 230 years to double, the second doubling took place in just 43 years. By 1974, the total population of the country had reached 71.4 million, and it reached 114.7 million in 1989. The Population Reference Bureau (1989) projects that at the current annual rate of natural increase (2.8 per cent per annum), the population of 1989 will double in about 25 years, and will reach about 153.4 million by the year 2000.

The implications of rapid population growth in a country with limited resources are serious. High population growth places unbearable pressures on resources and threatens to cause catastrophic effects on the country's socio-economic development. Rapid growth also contributes to high population density and low land-person ratio. In 1974, there were 1,286 persons per square mile, whereas in 1989, this figure was 2,063 (an increase of 60 per cent). Per capita land available for cultivation declined from 0.32 acres (0.13 hectares) in 1974 to 0.2 acres (0.08 hectares) in 1989. The high growth rate also produces a very young population structure. According to the 1981 census, one third (33.2 per cent) of the population was under 10 years with nearly half the population (46.7 per cent) under 14 years of age. A young population structure, in turn, ensures both a high growth potential and dependency ratio.

Different strategies have been introduced by the government to curb the high fertility levels. Although a family planning programme has been vigorously pushed since the 1960s, the planners have failed to achieve their goals. Bangladesh Contraceptive Prevalence Surveys reveal that while knowledge of family planning methods has

increased substantially, it has not been translated into practice. Consequently, the fertility rate in the country has remained persistently high. The total fertility rate of 7.05 in 1961 declined to 6.23 in 1981 (Bangladesh Bureau of Statistics, 1984b:164), a reduction of less than a child per woman in a time span of twenty years. This is a very small decline, as far as the expectation of the planners are concerned.

Several pertinent questions thus arise: Why has the fertility rate remained so high? What are the factors responsible for this? What are the characteristics of people who have high fertility? Are the people really apathetic to methods of contraception? Are the policies formulated to reduce fertility not focused in the right direction? These questions have drawn the attention of researchers, and many studies of various kinds have been conducted to search for answers to these questions (e.g., Stoeckel and Chowdhury, 1973; 1980; Samad et al., 1974; Samad and Ruzicka, 1976; Curlin et al., 1976; Bangladesh Rural Advancement Committee, 1977; Cain, 1977; 1978; 1985; Cain et al., 1979; Chaudhury, 1977; 1981; 1982; 1983; Latif and Chowdhury, 1977; Chowdhury, 1978; Chowdhury and Curlin, 1979; Adnan, 1979; Akbar, 1979; Alauddin, 1979; Alauddin et al., 1981; 1983; Amin, 1979; Amin and Faruquee, 1980; Huffman et al., 1980; Khan, 1980; Maloney et al., 1981; Ahmed, 1982; Muhuri and Rahman, 1982; Rahman, et al., 1982; Rahim and Mannan, 1982; Shahidullah, 1982; Siddiqui and Ali, 1982; Siddiqui and Chowdhury, 1982; Kabir, 1983; Ahmed, 1984; Sufian, 1984; Miah, 1985; Rob, 1987). Despite the volumes of reports to date, by and large, the results of these studies are inadequate to answer all of these questions satisfactorily. A close examination of the literature on Bangladesh reveals that the studies lack a comprehensive approach (either methodological, or conceptual, or both) through which an integrated analysis and a substantive explanation of fertility can be obtained. In accordance with the objectives of this study, the critical discussion that follows focuses mainly on aspects of the determinants of differential fertility in Bangladesh.

Studies on differential fertility in Bangladesh have generally been attempted in relation to socio-economic, demographic and cultural variables using either bivariate or multivariate analyses. Analysing fertility differentials in bivariate relationships only

provides an association between fertility and the correlates. From the association, it is not possible to determine whether the relationship was affected by the influence of other variables. For instance, Samad et al. (1974) found a positive correlation between education and fertility. Whether the correlation was influenced by economic or occupational status, or some other variables cannot be determined from their study. Some of the influences can be separated by multiway crosstabulations, but when the number of variables is large, this method becomes very cumbersome.

Multivariate regression analysis helps overcome these problems. The net effect of each independent variable on fertility can be identified simultaneously in multivariate regression analysis by controlling for the effects of other independent variables (Wannacott and Wannacott, 1981; Healey, 1984). However, prior to the application of multivariate regression technique in fertility analysis, a sociologically meaningful distinction of social groups is necessary in order to comprehend an integrated picture of the dynamics of differential fertility in Bangladesh.

Studies analysing differential fertility in Bangladesh in relation to socio-economic status of the respondents are inconclusive.[1] Sometimes, the findings of one study contradict those of another. Inconclusive results are a major impediment to the formulation of effective policies and of comprehensive theoretical conceptualizations. One of the major defects of these studies is the conventional use of socio-economic status in differentiating individuals. Hawthorn (1970:84) points out that the simple association of socio-economic status with fertility is too crude. Socio-economic status includes only three dimensions: education, occupation and income. But as we know, in traditional societies like Bangladesh, status/prestige is derived from other sources too. Along with these, the other sources of status/prestige also mould human behaviour, attitudes, norms and values. Thus, using only the conventional measurement of socio-economic status in differentiating individuals in Bangladesh seems to be mechanical and unrealistic.

---

[1] For a review of socio-economic determinants of fertility in Bangladesh, see Alauddin (1980).

Demographers have given much attention to class fertility differentials, because class differences are considered as probably the most pervasive and far-reaching of all group differences in societies (Wrong, 1980:8).[2] For Bangladesh, no national survey has been initiated to analyse and conceptualize this issue in terms of the hierarchical structure of the country. A few micro-studies (e.g., Adnan, 1979) have attempted to study differential fertility in terms of class structure based on landholding. These studies provide only a partial explanation, as the differentiation of people was done on one single dimension only. Information on single items may not provide an unbiased accurate representation of the whole group. It "gives us only a crude assessment of respondents on a given variable", when "several items may give us a more comprehensive and more accurate assessment" (Babbie, 1973:253).

One can argue that the categorization based on landholding is sufficient to reflect the real situation of the country, since 85 per cent of the nation's population is rural, and 61 per cent involved in agricultural occupations (according to the 1981 census). Agriculture is not just an occupation or a source of income, but a way of life that is deeply rooted in the social structure of traditional societies, where the rural people spend most of the day in farming and other activities connected to the land (Weitz, 1971:9). Stokes et al. (1986:305) note that "it seems likely that fertility behaviour is influenced by access to land and the social and legal conditions governing such access". Notwithstanding, classifying people only by landholding size only taps one dimension of the whole social structural context. It excludes the educated, the urban occupational and the business class from the analysis. Stokes and Schutjer (1984:196) point out that "although land-related institutions are an important component of most rural environments, a focus on the relationship between land and fertility necessarily abstracts a single dimension from the larger institutional context".

There also appears to be a problem with the positive land-fertility relationship. It has been found consistently that the amount of land owned or operated per family is positively related to fertility (Mueller and Short, 1983; Lee and Bulatao, 1983). Schutjer

[2] This 1980 publication is actually Wrong's doctoral dissertation of 1956.

and Stokes (1982a, and 1982b) dispute the direction of the relationship. They argue that operational landholding is positively related, while owned landholding is negatively associated with fertility. Cain (1985, and 1986) does not agree with Schutjer and Stokes. He argues that the conventionally formulated and commonly observed positive relationship between landholding and fertility is quite possibly an indirect, unintended (and, probably, unnoticed) consequence of other behavioural patterns associated with landholding status. He suggests that the relationship of landholding to fertility is spurious. In response to Cain, Stokes et al. (1986) insist that landholding is systematically related to fertility behaviour.

Another problem is that the landholding categories are so varied that sometimes they do not represent the intended abstraction. For instance, in some studies (e.g., Westergaard, 1978), households with landholding size of 15 acres or more are considered as upper class or surplus peasants, while in others (e.g., Wood, 1976), 2.5 acres or more is considered as the cut off point. Micro-studies are generally based on one or more villages, and the landholding pattern naturally varies from one village to another. Therefore, the categorization should be understood in the context of a specific village or villages. The upper class of one study becomes lower class in another according to this kind of approach. The scale should be consistent across the country so that the characterization and the abstraction are consistent throughout. Furthermore, a holding of 2.5 acres of very fertile land certainly has a higher acreage yield than a holding of 15 acres of bad quality land, and vice versa. Therefore, in addition to the size of the landholding, quality of the land is also in question.

The above discussion suggests that the conventional approaches of fertility analysis in relation to group differentials do not capture the relationship, nor do they include all the dimensions in one scale capable of adequately delineating social and economic groups in Bangladesh. For a better understanding of differential fertility in Bangladesh, a more comprehensive index is needed to categorize people into different social groups. An attempt has been made in this study to construct a composite index of elitism for categorizing social groups by combining social and demographic indicators.

Once the groups are identified, an analysis of differential fertility in terms of the hierarchical structure of Bangladesh is executed.

Is there any guarantee that the discrepancies noted in previous findings will be resolved with this approach? The answer is probably "no", since in social reality the absolute resolution of any problem is impossible to achieve. Besides, the variations in previous findings can be the products of a combination of factors such as sample fluctuations, response errors, measurement errors, regional contextual characteristics, time variations, and so on. Some aspects of these problems can be controlled by systematic study designs, but unexpected findings (i.e., no relationship with, or opposite direction in the effects of some macro variables such as urbanization, education, and occupation, on fertility) can be best explained in terms of the country's social, economic, political, demographic and cultural history and consequent development. Some of these important issues will be discussed in the next chapter.

B. Objectives of the Study

This study aims to conceptualize and then analyse the determinants of fertility in terms of the hierarchical relations of people in the traditional agrarian social structure of Bangladesh using the data from a national sample survey.

The specific objectives of this study are as follows:

(a) to construct a composite index of elitism to delineate the social groups in Bangladesh;

(b) to perform a bivariate analysis of the determinants of differential fertility;

(c) to execute a multiple regression analysis to examine the effects of selected variables on fertility;

(d) to propose suggestions for future research on fertility in Bangladesh, and to discuss the policy implications for fertility regulation programmes in Bangladesh.

C. Organization of the Thesis

The thesis is organized into eight chapters including this introductory chapter (Chapter One). Chapter Two discusses some important background issues pertaining to the explanation of persistent high fertility and low use of contraception in the country. A conceptual framework of fertility is developed in Chapter Three. Chapter Four contains the description of the data source. The methodology concerning the construction of the composite index and the delineation of the social groups is elaborated in Chapter Five. Analyses of some correlates of fertility in an endeavour to study the determinants of fertility with bivariate relationships are provided in Chapter Six. The findings of multiple regression models of the determinants of fertility for the elites, the sub-elites and the non-elites are presented in Chapter Seven. Chapter Eight provides a summary of the results of this study and suggests policy implications in light of the findings.

Chapter II

SOCIO-POLITICAL OVERVIEW OF BANGLADESH

A. Historical Setting of the Country

After the disintegration of the clan system, the social evolution of this part of the world (India in general, Bangladesh in particular) took a different path diverged from that of the West. Prior to the British advent, private ownership of property (especially of land) was absent. Western towns with their commercial middle class, communal organization, and relative independence of the feudal state did not develop (Pirenne, 1925). A bourgeoisie able to capture social and political control was absent (Karim, 1956). Unlike the economic organizations, social classes, and the nuclear family of the West, the self-sufficient village community, the caste system, and the joint family were the predominant institutions of this region. Production for the market was intertwined with the organization of production in agriculture which was clearly non-capitalist in nature, and capital remained confined mainly to the sphere of commerce (Turner, 1984:193-194). This commerce capital failed to perform its role in the development of a bourgeoisie, because it went completely underground as a result of the political toils and turmoils during the last phase of the rule of the Nawabs of Bengal (Bernier, 1891:225-226). This differential development was referred to as "Asiatic mode of production" by Marx (1859), "prebendalization" by Weber (1958 [1917]), "irrigation civilization" by Karim (1956), and "hydraulic societies" by Wittfogel (1957).

When the possibility of the development of the incipient native bourgeoisie was just emerging, British traders captured political power in India. The control of wealth went into the hands of British traders (Beaucamp, 1935; Smith, 1944; Karim, 1956; Habib, 1969). Through procuring capital and raw materials for industrial development in Britain,[3] the British capitalists destroyed the Bengali textile industry, which had always

[3] Continuing primary accumulation of capital from India played a vital role in the capitalist development of Britain. At the end of eighteenth century, the total rate of capital formation in Britain was probably no more than seven per cent of its national income. At this critical stage of the Industrial Revolution, India was furnishing an amount 30 per cent of the latter's total national savings

existed as a challenge to the nascent British industry (Alavi, 1980:46). They dislocated the inland trade and rendered the indigenous merchant capital idle, and forced it to seek refuge in the acquisition of landed property, rack-renting, usury, etc. (Sau, 1984:38). They forced the dispossessed artisans to seek jobs in agricultural occupations (Turner, 1984:196). While they introduced some important institutions (e.g., money economy, proprietary rights in land, English education, bureaucracy, etc.) to modernize the society, all were to benefit themselves rather than the natives.

The consequences of these changes had tremendous effects on the region's indigenous capitalistic development. The emergence of usury and merchant capital pre-empted the capitalistic production in agriculture. In the context of colonial domination, a large rural proletariat was created, which had to depend on land. They did not emerge as free labourers alienated from the means of production. The dominant classes that emerged in the rural areas as a consequence of the introduction of proprietary rights of land remained parasitic on the system (Islam, 1978; Jahangir, 1979; Siddiqui, 1982; Turner, 1984). The introduction of bureaucracy before the emergence of independent political parties and leadership destroyed the possibility of the natural growth of political institutions.

With these historical and structural changes taking place during the eighteenth and the nineteenth centuries, a bitter resentment of the British developed among the Muslim people in the Indian sub-continent. The Muslims could not accept the British, because by usurping political and economic power through the overthrow of the Nawab in Bengal and the Emperor in Delhi, British domination had ended five centuries of Muslim rule in India. Thus, the pride of the Muslims was shattered by this political change. As a result, the Muslims of this region remained hostile to any modern idea or institution introduced by the British (Hunter, 1871:168-169). About a century after the advent of the British, the Muslims became reconciled to the British system when they realized (a) that they were falling far behind the Hindus in every sphere of social life; and (b) that staying outside the system did not help them at all if they had to fight the British.

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[3](cont'd) transformed into capital (Sau, 1984:37).

On the other hand, the Hindus took advantage of the situation for two reasons. First, they were free of that kind of pressure initially felt by the Muslims, because the Muslim and the British rulers were both perceived as foreigners who invaded India and captured political power, the latter even the economic power. Second, they accepted the modern British ideas and institutions because at that particular moment of time, these institutions paved the way for private entrepreneurship, which was not possible for anyone (Muslims or Hindus) under the Muslim rule with the absence of the freedom of commodity production for the market. However, when the British motives for introducing these modern institutions were exposed, regardless of religious denomination, the people of India started to resist British hegemony, resulting in a large scale nationalist movement.

Two hundred years of British colonial rule ended in 1947 with the partition of British India into India and Pakistan. The post colonial era began in East Pakistan with the colonial heritage of an absence of capitalist development in either agriculture or industry; an absence of a recognizable bourgeoisie or a committed social and political leadership; a prevalence of usury, speculative trade and land purchase, and petty leasing; a parasitic middle class; a hostile attitude of Muslim people toward modern ideas; and a way of life based on traditional agrarian economy.

Bangladesh (then East Pakistan), forming the eastern wing of Pakistan, remained a hinterland. Karachi replaced Calcutta as the central power of domination. The West Pakistani rulers dominated in every sphere of power and authority, and exploited the resources of the eastern region in a colonial fashion by ignoring the majority Bengali population and its needs (Rahman, 1968; Jahan, 1972; and Maniruzzaman, 1982). During 24 years of rule, West Pakistan transferred about an estimated 1.5 to 3.5 billion US dollars from the East (Faaland and Parkinson, 1976:8). Despite the higher contribution to the export earnings by the East wing, the profits accrued to West Pakistan. The major share of foreign aid and loans was spent in the development of the Western wing. Sobhan (1981:16) shows that West Pakistan utilized 100 per cent of the external resource inflows up to 1960–61 for its own development. During the following

decade, i.e., during 1961–1969, East Pakistan's share was only 11 per cent. That is, the potential that remained for independent and indigenous growth was exhausted by the West Pakistani neo–colonial exploitation (Turner, 1984:190).

B. Current Socio–Economic Conditions

The British colonial and the West Pakistani neo–colonial exploitation had reduced Bangladesh to one of the poorest regions in the world (Turner, 1984:190), and set the stage for chronic underdevelopment. The extent of poverty can be seen through some important indicators. For instance, the per capita GNP for Bangladeshi people was US $160 in 1987 (Population Reference Bureau, 1989). It should be noted that even this low figure is not a real reflection of the majority of the population. The vast majority are either subsistence farmers or landless labourers. The per capita GNP may be a reflection of the average earnings of a maximum of about a quarter of the total population who actually draw wages or have other sources of cash income. Bangladesh Bureau of Statistics (1984a) shows that the contribution of the industrial sector to GDP was 10 per cent in 1982–83. Daily per capita calorie consumption was 1960 kilojoules (84 per cent of the required amount) in 1981. The country had one physician and one nurse for every 8,195 and 23,736 persons, respectively, in 1980. Only about 20 per cent of the population was literate, according to the 1981 census. It should be pointed out that this literacy rate does not provide a real assessment of educational attainment of the people. The 1981 census indicates that only 3.2 per cent of the population (16.2 per cent of the literate population) had an educational attainment of Secondary School Certificate and above. This suggests that a very low proportion of people has any effective and meaningful education.

About 13 per cent of the population lived in urban areas in 1989. It should be noted that the urban centres have not grown as a result of industrialization. Urbanization in Bangladesh reflects a different process from that of the West. The urban centres are the results of population concentration mostly through rural to urban migration. The industrialization that has taken place in the country has had practically no strong impact on the total social life (Hossain, 1956). Factory workers have actually been working in

industrial establishments with all the rural attributes. Cities have been established, but urban values in the sense of urbanism as a way of life have not flourished. The urbanization process has failed to affect the traditional institutions and generate an urban way of life, as urban growth has occurred "out of phase" with the history of this region (Bose, 1965). In other words, urbanization in Bangladesh is not only urbanization by peasants, but also a "peasantization of the cities" (Hossain, 1956; Maloney et al., 1981:250).

As the majority of the population (87 per cent in 1989) lives in rural areas with agriculture as the main stay (61.3 per cent in 1981), land relations play a significant role in the country's development process and the people's lives. Data from the Land Occupancy Survey of 1979 show that land ownership is highly concentrated in Bangladesh — 91.2 per cent of the land was held by 39.5 per cent of the total households. The control of land by a few is on the increase, which is reflected in the increasing proportion of landlessness. While 11.1 per cent of the households were landless in 1977, it increased to 14.7 in 1978 and 15.4 per cent in 1979. In fact, the size of landlessness is much higher, if the definition includes households with farmsize of 0.05 acres or less. Jannuzi and Peach (1980:21) compute the degree of functional landlessness in 1977 and 1978 as 48.1 and 50 per cent, respectively.

The change in the distribution of land ownership is generally attributed to the rapid fragmentation of land into small holdings. The inability of many of the small landholdings to remain viable has led to an increasing number of landless agricultural labourers in the country. The main reason for this is believed to be high population growth and limited land resources (Chaudhury, 1981). But high population growth alone cannot be responsible, for growth itself is a result of the historical development of relations between land and labour (Adnan, 1982). Historically, the social relations between groups or classes have developed in such a way that they help perpetuate high fertility in the country. The existing agrarian relations induce people to have large families, especially with sons (McNicoll, 1980:447). People from all strata perceive having more children as an advantageous strategy.

Rich peasants opt to have more children to maintain control over the means of production. To them, having more sons means physical labour resources, a proper management strategy for the control of land and wealth, certainty of dominance in power structure, and increase in social influence through matrimonial relationships with other rich peasants (Adnan, 1979). Poor peasants tend to have more children for the survival of the family. They need more hands to work for now and the future (Cain, 1977; Cain et al., 1979; Khuda, 1980; and Begum, 1984), because the State does not provide sufficient welfare incentives to overcome the risks. Some limited facilities provided by the State (e.g., agricultural credit, subsidized rationing, fertilizer, etc.) are appropriated by the rich peasants through their links with the power structure (Arther and McNicoll, 1978:43; Bangladesh Rural Advancement Committee, 1979 and 1980).

In the long run, this strategy of producing several children does not pay off. Although the poor peasants consider unrestricted fertility as the only way out (Schendal and Faraizi, 1985), decline in the per capita wage rate, increase in the competition in share-cropping, and low returns from the tertiary sector make it very difficult for them to be able to generate sufficient income for survival. Ultimately, they are forced to migrate to areas where better opportunities for work are available.[4] After one or two generations, the rich peasants fall into the group of poor peasants and landless labourers because of (a) fragmentation of land through the law of inheritance where the property is distributed equally among sons; (b) concentration of land in the hands of a few through usurious exploitation; (c) low yielding techniques of production; and (d) unstable market mechanisms. Although through the process of social mobility, some new families enter this stratum, the downward course of action continues. In spite of the ultimate disadvantage of large family size, people refuse to plan for deliberate prevention of conception.

[4] The analysis of 1981 census data by Nurun Nabi (1989) shows that 14 out of 21 districts in the country lost people by migration. The net gaining districts were those that contained either large cities, or more opportunities for agricultural occupations, or sparsely populated areas.

C. Foreign Assistance and Development

Following independence in 1971, the new nation began its existence with explosive population growth, a devastated economy and very little potential for development on its own. As a result, the country had to depend on foreign aid not only in terms of food, commodity and money, but also in terms of human resources to design and operate development projects, policies and programmes (Faaland, 1981:4). The situation was well responded to by the international aid donors community. In the first decade of its existence, Bangladesh received a total of 7.7 billion US dollars in aid funds from over 30 countries and 12 multilateral organizations (Ehrhardt, 1983:23). From this, it is clear that Bangladesh was one of the favourite countries for the donors. Why are the donor countries so interested in giving aid to Bangladesh, where the potential for economic gain is not very promising? Faaland and Parkinson (1976:5) suggest that Bangladesh is the "test case" for the donors to experiment with different models of economic development. Ehrhardt (1983:23-27) points out that in addition to humanitarian grounds to alleviate the poverty conditions of the country, its location and its religion also motivate the donors to provide aid to the country.

Whatever the motivating factors for the donor countries may be, the hard fact is that Bangladesh receives a huge amount of foreign assistance for its economic reconstruction. The contribution of foreign aid to development is not easy to measure, because in addition to aid, the development process in Bangladesh also hinges upon other external and internal factors like the rising prices of oil and food, the fluctuating jute prices in the international market, floods, droughts, cyclones and natural disasters (Ehrhardt, 1983:41). However, it can be said that with foreign aids, various models of development have been experimented with over the last two decades, but the performance has been indeed poor. The benefits mostly went to small elite groups (both rural and urban), who dominate the economic and the political lives of the society (Bangladesh Rural Advancement Committee, 1979 and 1980; Jannuzi and Peach, 1980).

The study by Ehrhardt (1983) shows that the major portion of the aid during the first decade after independence was in terms of food and commodity. Of the 7.7 billion aid dollars, 29.5 per cent was in food, 40.8 per cent in commodities, and 29.7 per cent for projects. The striking feature is that the project aid disbursements were heavily concentrated on infrastructural sectors, such as transport (23.6 per cent), industries (21.0 per cent), power (14.9 per cent) and communications (1.9 per cent). Despite the urgent needs in agriculture, food production, education and training, and health and population control, only 15.9 per cent of the total project aid money was spent in agriculture, rural development, and water and flood control, and only 8.7 per cent was allocated in the social sectors of education and training (2.7 per cent), health (3 per cent), and population planning (3 per cent).

All major donors followed the same pattern. Canada, as one of the major donors to Bangladesh, can be used to illustrate the manner in which aid has been given. Canada disbursed over half a billion dollars, an amount exceeded only by its contribution to India. Among the donors, Canada was the fourth largest, following the United States, the International Development Association and Japan (Ehrhardt, 1983:45). The total aid disbursement by Canada from 1972–73 to 1980–81 shows that 66.5 per cent of the total Canadian bilateral aid was in food, 17.8 per cent in commodities, and 15.7 per cent in projects. Like other donors, Canada disbursed a major segment of its project aid to the infrastructural sectors, especially railway (39.5 per cent) and energy (16.4 per cent).

A question that follows is why did the urgent sectors get a low allocation? The answer to the question is not straightforward, because the allocation of developmental expenditure reflects the interaction of priorities and the terms and conditions between the recipient and the donor countries. According to Ehrhardt (1983:34–35), on the donor's side, a combination of four factors influences the sectoral disbursements: (a) "a certain amount of donor inertia... a tendency among donors to stay in the sectors with which they are familiar" (e.g., infrastructural development); (b) "the predisposition of aid donors to avoid or minimize risks"; (c) budgetary pressure faced by the donors from within; and (d) economic self interest of the donor countries. On the receiver's side, any independent

nation would try to obtain aid and grant which is not tied whenever possible. Bangladesh is no exception to that, but in the bargaining process, the donor countries are at an advantage. Not only has Bangladesh little control over the international market, trade relations, and foreign aid, but also the country could not manage her own economy without foreign assistance (Parkinson, 1981:33). In addition to the restrictions with aid, the negligence of the urgent sectors by the government has contributed a great deal to lack of development in these areas.

Heavy foreign aid contributions pouring into the country may be considered to be a ploy of the donors to make Bangladesh aid-dependent for the expansion of their economic, political, cultural and technological domination. Whether it is a ploy or not is an issue for an independent study, which is beyond the scope of this thesis. However, it can be stated that foreign aid has mixed effects on the country's economy and development. First, the availability of aid may have provided the government with sufficient support that they neglected to devise necessary plans for self-sufficiency. Second, the donors may have influenced the formulation of policies of development that tended to throttle the germination of indigenously effective and viable plans. It may be that a combination of these factors has played a role in the development process. This has led to a condition where, to attain a level of momentum in socio-economic development and a stable political situation, large amounts of international aid have become an absolute requirement. [For a more detailed account, see Faaland and Parkinson (1976), Faaland (1981), and Ehrhardt (1983)].

D. Changes in Government and Politics

Bangladesh has never been politically stable. Political control has shifted from one ruler to another frequently. These changes have negatively influenced the socio-economic development of the country. Following a nine-month long bloody war against the Pakistani Army, the Awami League Party led by Sheikh Mujibar Rahman assumed government after independence in 1971. The Soviet style of socialistic policies were employed in socio-economic planning. Major industries, banks, corporations and

companies were nationalized. Nationalized industries failed to increase the per capita GNP. The administrators of the nationalized institutions were alleged to be corrupt. The volatile situation in the economy and the disastrous floods in 1974 resulted in a famine, which took a toll of hundreds of thousands of lives. The government declared one party rule in 1975 by banning all other political activities and democratic processes. This created a stir among the people of the country. In August 1975, Sheikh Mujibar Rahman and his family were killed by a group of military officers, and Martial Law was promulgated.

Following a number of military coups and counter-coups, Major General Ziaur Rahman captured power in November 1975. He formed a political party of his own, and retained power through a referendum and general election. He introduced a policy of development through self-help. But in 1981, he was killed in an attempted coup. In 1982, Lt. General Hossain Muhammad Ershad took over accompanied by a bloodless coup. He pursued the same political strategy as all the military generals who assume power. He formed his own political party, and called a general election, in which his party won the majority and formed the government with ambitious political and economic promises. But during his seven years of rule, corruption and misuse of foreign aid allegedly resulted in siphoning many millions of dollars into military coffers or the pockets of venal officials (Nickerson, 1991). Ershad was ousted by the "democracy movement" in 1990. A general election was held in February 1991, but no political party won absolute majority. The Bangladesh Nationalist Party has formed a coalition government under the leadership of Mrs. Khalida Zia (wife of the late President Major General Ziaur Rahman).

E. Population Programmes and Performances

The political and economic instability of Bangladesh had disastrous consequences on the economy and the life of the people. Population policies have also been affected by these changes. Changes in government and politics have influenced the programmes and policies in terms of their organizational structure, strategic directions and targets. Efforts were taken as early as 1953 at private and voluntary organizational levels to initiate

family planning in Bangladesh (then East Pakistan). The government recognized the population problem during the first Five Year Plan (FYP) of Pakistan (1955–60), particularly after 1958, and made provision for financial support from the Central Government to help and promote family planning through voluntary efforts. Although it paved the way for the future development of population regulation in the country, the programme failed to achieve the targets set forth in its plan (Adil, 1969:16). In the second FYP of Pakistan (1960–65), the government made a budgetary provision for family planning services in the country stressing the distribution of contraceptives through clinics and hospitals. But the programme achieved only 15 per cent of its contraceptive distribution target.

The family planning scheme was revised during the third FYP of Pakistan (1965–70). Stress was laid on the use of intra uterine devices. A decision was taken to award monetary incentives to the acceptors of clinical contraception and to the recruitors, and fees to the doctor and the paramedic carrying out insertions or sterilization operations. This programme created a country-wide awareness of family planning (knowledge on family planning rose to 45 per cent), but the National Impact Survey conducted in 1968–69 by the Pakistan Population Council indicated that only 3.5 per cent of the couples, aged 15–49 years, became regular acceptors of family planning services (Training Research and Evaluation Centre, 1971).

After independence in 1971, a large number of new policies were incorporated into the first and second FYPs (1973–78 and 1980–85, respectively). In June 1976, the government came out with concrete proposals on a National Population Policy— the first comprehensive official statement on the issue. The main features of these two FYPs were: (i) the system of financial incentives was stopped; (ii) oral contraception was introduced for the first time; (iii) the abortion law was temporarily relaxed; (iv) family planning and health programmes were integrated; (v) maternity child health services and family planning were integrated under the population control division of the Ministry of Health and Population; (vi) stress was laid on field workers (both males and females) at the grass-roots level; (vii) a lot of importance was attached to the mass and local

folk-media and the involvement of voluntary organizations and social groups of all kinds in promoting family planning in Bangladesh. The Second FYP aimed at a drastic reduction of fertility (NRR=1 by 1990), and a reduction of total fertility from 6.4 in 1975-76 to 2.6 in 1985. The total population was not to exceed 121 million by the year 2000 (Planning Commission, 1980:xvii-27).

After the promulgation of Martial Law in March 1982, the government launched a two-year Emergency Population Control Programme (Population Control and Family Planning Division, 1982) aiming at 100 per cent achievement of the targets (to raise the current use rate of contraception from 18.6 per cent of 1981 to 38.0 per cent by the year 1985) set in the second FYP period (1980-85). Whether this goal was attained, we cannot say due to of lack of information. An indication can be obtained from the findings of the 1983 Contraceptive Prevalence Survey of Bangladesh (Mitra and Kamal, 1985). It showed that the current use rate of any method increased from 18.6 per cent in 1981 to 19.1 per cent in 1983. The current use rate of modern methods increased from 10.9 to 13.8 per cent during the same period of time. On the other hand, the ever use rate of a method declined by 2.3 percentage points. All these reflect a complex situation in meeting the objectives of the plans.

It has been argued that inadequate availability of contraception, lack of field level services and service related activities, neglect and inadequate follow-ups in case of complications and side-effects, fear and anxiety over the efficiency of the available methods of contraception are responsible for the low level of contraceptive use in Bangladesh (Schearer, 1976; Sorcar, 1977; External Evaluation Unit, 1983; and Ali and Rahman, 1983). This contention was tested in 1975 by a saturation-distribution scheme in rural areas of the country. Contraceptives were distributed widely. The initial impact was impressive. When the government conducted a one-week, nation-wide house-to-house distribution campaign in 1976, the effect was found to be minimal. As the programme evolved, the project proved to be ineffective (Rahman et al., 1980).

Demeny (1975) has attributed the low level of contraceptive use to a lack of sufficient demand for family planning. According to Sirageldin et al. (1975), the real bottleneck is the generation of demand for contraception. It is, therefore, important to ask why there is a lack of motivation and demand for contraception in Bangladesh. According to Demeny (1975), the family planning programmes could not resolve some critical issues in the rural areas. Where the total set of material conditions is unchanged, the effect of a birth control programme upon fertility behaviour will be less. Cain (1978:431) argues that contraceptive use in rural areas in Bangladesh is low "not because [people] are unaware that methods of contraception exist or because contraception is unavailable, but because most have no material reason for interrupting the natural reproductive process". It can, therefore, be stated that family planning is not within the calculus of the people of the country. High fertility is perceived by the people to be advantageous to them, even though it probably is not.

More importantly, the spread and diffusion of contraceptive technology has not been promulgated using sociological knowledge. At the early stage of the programmes, the role of village practitioners was ignored. A study in Comilla in the early sixties showed that involvement of village practitioners improved acceptance of the contraceptive delivery programme (Rahman and Mahmood, 1982). The village practitioners are the primary source of medical advice for more than 90 per cent of the population of this country. People visit them not only for matters related to health, but also for advice and guidance on household, religious, and political matters. They are related to the villagers through kinship, and regarded as respected members of the community. These practitioners stay in the village, visit each and every house, and can establish communication with women easily. Rahman and Mahmood (1982) find that about 97 per cent of the male and 96 per cent of the female respondents opined that training of village practitioners in the field of family planning would help improve the delivery of family planning services.

The monetary incentives paid to doctors, referral agents, and clients for clinical contraception hampered the main purpose of the programme. It encouraged recruiting unsuitable acceptors like unmarried or very young people or people beyond the reproductive age. This also led to corruption and inflated reporting (Ahmed, 1971:6–13; Planning Commission, 1973:554). Incentives to clients did not seem to encourage a desire to stop future births. Rather the people (persuaded by the referral agents) went to the clinics when they were in need of money/clothes in times of economic crises. It was tantamount to tempting the poor to achieve the targets and goals of the clinics.

The introduction of various methods of contraception did not proceed in an orderly manner. For example, the programme started with the introduction of IUDs in the early sixties. The IUD method requires trained medical personnel with clinical facilities in the field and subsequent follow-ups. Lack of facilities, post-insertion complications and side effects left uncared for brought the IUD into wide-spread disrepute (United Nations Fund for Population Activities, n. d :23) The clinical methods (e.g., sterilization) were introduced in the mid-sixties and oral contraception after 1971. In a situation, where family planning is not within the calculus of the people, the introduction of complex methods at the initial stage hindered the smooth development of the programme. IUD and sterilization are not popular in Bangladesh, because these methods terminate future births permanently or almost permanently. Also there is a perception that these methods are for the lower classes. The initiation of the family planning programme with the introduction of oral contraceptives would have had greater effect on the acceptance of contraception in the country. It may be noted that there are some problems with oral pills related to health hazards and side-effects. But they seem to be less complex when compared to the IUD. The oral pills appear to be more socially acceptable than sterilization, as demonstrated by the Contraceptive Prevalence Surveys.

As with the diffusion of any new technology, initial efforts to promote family planning were limited to mass motivation and educational campaigns with small scale contraceptive services provided through hospitals and clinics located in urban areas. The eventual dissemination was not properly planned. For instance, the whole focus of the

programme was on the people of the lower stratum. It is true that numerically they are huge and the focus should be on them. But we believe that the focus should have also been at the upper stratum, because people from the upper stratum remain the main cause of population explosion, and ultimately these families join the lower stratum after two or three generations, as pointed out elsewhere. The planners did not take this fact into account in developing their policies or strategies.

Even granting that the people from the lower stratum should be the target of the programmes, appropriate strategies were not considered. Diffusion starts from the upper stratum of the society and trickles down. The influence of the people from the upper stratum arises through their setting up of standards of life-style, which can affect the aspirations, values and behaviour patterns of the masses (Allen, 1971). People have a tendency to follow the leaders, the pioneers, the forerunners, and the innovators. People try to internalize certain attributes, values and norms, which are regarded as prestigious, if not superior, no matter what socio-economic and cultural characteristics they have. In other words, the members of the lower stratum imitate the behaviour patterns of the members of the upper stratum. The planners did not use this rule of diffusion in projecting the images and benefits of family planning. If one looks at the propaganda materials, one would find that the characters or families that are projected in the advertisement and films are drawn from either the lower middle or the lower stratum of the society (e.g., a school teacher, or a petty shopkeeper, or a farmer). The effect would be much better if the characters were drawn from the upper stratum of the society (e.g., a top bureaucrat, a university teacher, a banker, a political, or a social leader). People always judge themselves with respect to significant others as the reference groups.

Finally, the commitment and dedication of the workers from the top to the grass-roots level can be questioned. They failed every time they set a target during all these decades.[5] The problem can be traced back to the origin of the governments. The

[5] It should be noted that this is not only the case with population control programmes, but also with other development programmes taken by the government. For instance, legislation was promulgated time and again to reform the existing unequal rights and privileges of people in the land tenure system, but little success has been achieved (Abdullah, 1976; Jannuzi and Peach, 1980).

governments in Bangladesh originate mostly from military coups, and sometimes, from the assumption of power by a political party through election. Neither the military group, nor the political party set any specific policy on population to address the population issues before assuming power. After assuming office, the ruling leaders realize that population has to be controlled under the existing precarious socio-economic conditions of the country. The bureaucrats, who are out of touch with the people, are asked to initiate the programmes. The result is a formulation of ambitious policies on paper that remain meaningless to the people. A large gap between the government and the masses is created. As a consequence, people's participation and involvement remain virtually negligible. Experience shows that peoples' participation can make a big difference in achieving goals. The case of Kerala State in India can be cited as an example (Ratcliffe, 1983). In Bangladesh, the government, the administration, the planners, and the political leaders have all failed to make the people believe in them, and in themselves.

Chapter III

THEORETICAL ORIENTATION

A. Demographic Transition Models

The pattern of population change in the Western World during the nineteenth and the early part of the twentieth centuries has led scholars (Notestein, 1945 and 1953; Thompson, 1946) to develop the model of demographic transition. According to this model, a decline in fertility was seen as a reaction to the rapid decline in mortality. Mortality rates declined as a result of the general improvements in the lives of people, their diet, water supply, housing, sanitary conditions, and so on. Declines in fertility rates followed later as a result of changing societal conditions, cultural values, norms, and roles and functions of family, believed to be the effects of the changes in macro-developmental variables (e.g., industrialization, urbanization).

The demographic transition model was found to be inadequate to explain the experiences of countries like France and Japan. Empirical evidence provided by the European Fertility Project suggests that the historical experience was not uniform throughout the Western World. van de Walle and Knodel (1967) argue that European fertility declines occurred in the context of widely different social, economic and demographic conditions. Coale (1973), studying European fertility history, points out that economic changes may be sufficient but not a necessary condition for fertility decline. He found that many provinces of European countries experienced a rapid drop in fertility rates even though they were not very urbanized, had high infant mortality rates, and had a low proportion of people engaged in industrial occupations (Weeks, 1986:43). Coale et al. (1979) demonstrate that a number of Asian Soviet Republics with modern macro-structural characteristics had high natural marital fertility.

The situation in the less developed countries of today provides a complex picture (Coale, 1983). All the less developed countries should have been at the first stage of demographic transition as they fail to meet the expected preconditions — that of industrialization and concomitant urbanization — for the completion of the transition.

Studies show that a number of less developed countries with poor rural populations such as Sri Lanka (Fernando, 1976), Thailand (Knodel and Debavalya, 1978), Kerala State of India (Krishnan, 1976; Ratcliffe, 1978; and Mahadevan, 1979), and probably Indonesia, demonstrate considerable declines in fertility. Caldwell (1976:121) points out that to justify this apparent inconsistency to the required historical precondition, the demographic transition theorists inserted the concept of modernization or near synonyms (e.g., the modern developmental process) into their formulations. This implies that a generation of new fertility behaviour is possible by adopting Western institutions (e.g., schools, women's rights, legislation, full market economy, etc.), attitudes and ideas, and effective modern contraceptive technology. This may be true for some of the less developed countries, but for others (e.g., Bangladesh, Pakistan, Zaire), this appears to be not true. It seems then that it is difficult to specify a threshold of socio-economic development which triggers a decline in fertility, and hence, the explanatory value of the classical demographic transition model seems to be weak.

Despite the weak explanatory value of the classical demographic transition model, it initiated debates in understanding demographic phenomena and associated policy implications, particularly for the less developed countries. The argument that a set of social and economic changes, characterized as modernization, would transform a predominantly rural-agrarian society into an urban-industrial one with a transition of fertility from high to low levels was appealing and convincing. According to this argument, government support of birth control is unnecessary.

Development versus contraception strategy was debated at the World Population Conference in Bucharest in 1974. The supporters of the development strategy won, and passed a World Population Plan of Action that countries wishing to affect fertility levels give priority to development programmes and educational health strategies which, while contributing to economic growth and higher standards of living, will have a decisive impact upon demographic trends, including fertility (Population and Development Review, 1975:163-181). But the debate continued to grow. Blake and Das Gupta (1975), Demeny (1975), Demerath (1976), Davis (1978), and Petersen (1978) argue that socio-economic

development will generate modern ideas and attitudes, and fertility decline will take care of itself. On the other hand, based on the new evidence generated by the European Fertility Project. Knodel and van de Walle (1979) argue that modern fertility decline started only when couples began to use parity dependent family limitation methods. Any decline in fertility before the transition had occurred due to the practice of late marriage and celibacy which are not methods of parity dependent family limitation. There was no historical evidence of parity specific family limitation before the transition.

In spite of the importation of Western institutions, ideologies, and modern contraceptive technology to Bangladesh, the fertility level remains high. The failure of the more than three decades of family planning programmes points to another debate initiated by Carlsson (1966) and Knodel (1977). Carlsson, referring to Swedish data, suggests that the fertility transition in Europe was a result of historical adjustment. The fertility decline was due to the practice of birth control methods prior to the onset of incipient fertility decline in Europe. His explanation of Swedish fertility decline is based on the Theory of Multiphasic Demographic Response advanced by Davis (1963). Analysing the evidence from the age patterns of fertility in Europe and Asia, Knodel (1977:242) argues that "a small section of the population might have practiced a substantial amount of family limitation ... there is no reason [from this] to assume that the populations at large were aware of this behaviour ... deliberate prevention of birth to limit the number of children was innovative behaviour for the vast majority of the population at the onset of the fertility transition".

The main implication of the innovative perspective is that a rapid spread of contraceptive methods serves as a catalyst to change fertility desires, values and norms. The failure of the family planning programmes in Bangladesh does not provide a strong support to this argument. It points to the significance of Coale's (1973) preconditions that must be fulfilled for the sustained decline of fertility: (a) fertility must be within the calculus of conscious choice; (b) reduced fertility must be advantageous; and (c) effective techniques of fertility reduction must be available. For Bangladesh, only condition (c) is met.

Explanation of the process of fertility decline in terms of the demographic transition model (both the classical and the revised based on the European Fertility Project) appears to be inadequate. The classical demographic transition model dealt with only two vital processes (fertility and mortality) and related them only to the economic processes (industrialization, urbanization and modernization). The revised model emphasized only the significance of contraceptive practice. Neither of these two versions brings out the causal mechanisms (which imply the interrelationship among all processes — economic, demographic, cultural, environmental, psychological, political — within the whole complex of social structure) underlying the dynamics of vital processes.

Krishnan (1981) proposes a systems approach to demographic transition. He argues that mortality need not decline prior to fertility decline. Second, industrialization and urbanization may not necessarily be the sufficient prerequisites for the demographic transition considering the European exceptions during the nineteenth and the twentieth centuries and the current situation in the less developed countries. Third, even though the vital transition is completed in many nations, there is a likelihood that some of the nations will experience a new transition. Following Biraben (1979) and Muhsam (1979), he concludes that the vital transition is one of several transitions that the world population has experienced in the past and will experience in the future. Finally, social change involves the transitions not only in fertility, mortality and contraceptive practice, but also in other societal processes involving aging (United Nations, 1956), migration/mobility (Zachariah, 1963; Zelinsky, 1971 and 1979), nuptiality (Hajnal, 1965), family (Taeuber, 1969), economics (Rostow, 1971), politics, culture, psychology, and so on. To explain changes in reproductive behaviour, these transitions must also be taken into consideration in the same model, According to Krishnan, the advantages of this integrative system approach are (a) a causal explanation for the demographic transition becomes possible, the analysis of which may begin at the micro level and move to the macro level following a proper generalization procedure; and (b) the so–called "exceptions" need no extra consideration.

However, Krishnan does not state explicitly the strategies for conceptualization, nor does he state the procedure(s) of generalization to follow for the analytical movement from micro to macro level. Not stating the strategies for conceptualization makes his approach more open than if he had stated them explicitly. Researchers are thus free to choose/devise their strategies according to the level of analysis their studies are involved with. One can start either with the strategy of inductive logic, i.e., with studying each of the sub-systems separately and then integrate them together into one system for generalization. Alternatively, the strategy of deductive logic, i.e., with studying the whole complex social structure to delineate each of the sub-systems in order to explore the dynamics of the causal explanation of changes in fertility in light of demographic transition in both the more and the less developing countries, can be used. But not stating the generalization procedure(s) relating to the analytical movement from micro to macro level appears to be a weakness of his approach.

B. Model for the Preindustrial/Peripheral Formations

Using knowledge of the unique historical development of Bangladesh society, Adnan (1982) attempts to conceptualize fertility trends and their determinants in the peripheral and the pre-capitalist formations.[6] His notion of causality "presupposes that 'the immanent, historically changing limits of the human reproduction process' (Marx, 1973:607) are socially and materially structured, the broad limits to population growth being set in terms of macro and micro level labour needs in relation to the means of production and material reproduction (subsistence) [Marx, 1973:607-8]. This relationship is seen to be differentiated by classes specific to any given social formation and reflects their differential control of the means and organization of production" (p. 205). He

[6] The term "peripheral formation", borrowed from Frank (1967), is defined by Adnan (1982) "as being embedded in the world capitalist system dominated by metropolitan capitalism, but lacking significant capitalist development", and "pre-capitalist formations ... a residual category by the historic absence of endogenous capitalism and linkages with exogenous capitalism through the capitalist world economy" (p. 209). Adnan restricts his formulation totally to the context of Bangladesh.

examines the process of capitalist development to characterize the analytical context of the preconditions underlying demographic transition, and redeploys the concepts and categories arising out of it to formulate an analytical framework for the peripheral formations. According to him, for the capitalist countries,[7] development in the relationship between capital and labour provides a precondition for the changes in the whole social structure including fertility decline. In the peripheral/pre-capitalist countries, the relationship between land and labour with their colonial heritage creates a situation where the generation of absolute surplus population does not match with the macro level demand for labour.

Adnan discerns three phases of capitalist development and fertility trends. The first phase is the point of departure with the increased demand for labour force in the initial stages of the process of capital accumulation. The second phase is the formal subsumption of labour to capital when the process of accumulation takes the form of expanded reproduction of capital and labour. This leads to a situation where its labour requirements exceed the size of the pre-existing labour force, i.e., rapid renewal of the generation of labour occurs. In the third phase, the real subsumption of labour to capital occurs. The adoption of improved labour saving technology to increase the productivity of labour, and changes in the conditions of living of the workers (as a result of trade unionism, political actions, state legislations, etc.) generate macro level incentives (e.g., unemployment benefits, health insurance, pension plan, etc.), as well as micro level incentive structures leading to an induction of fertility decline amongst the labour force at the mature stage of capitalistic formation (pp. 208-209).

With the understanding of the phases of capitalist development and fertility trends, he distinguishes three phases of development in the peripheral/pre-capitalist formations. According to him, unlike the capitalistic formations, "analysis" of the population processes in the peripheral and the pre-capitalist formations "has to focus on the stage preceding the formal subsumption of labour to capital" (p. 210). The pattern of

[7] Adnan also takes the socialist countries into consideration at the end of his discussion.

high fertility and the pre-existence of absolute surplus population in these formations cannot be equated to the growth of the industrial reserve army in the process of capital accumulation (p. 210). Instead of capital, the distinctive feature of these formations is the role of land, which is physically inelastic. Accessibility to it is socially limited in terms of ownership and control, and has little potential scope for increasing its aggregative level of the means of production. Agriculture is the main sector of production, and technology of production is backward and unchanging with low productivity. Unlike the situation under capitalism, the relationship between land and labour determines the preconditions for high fertility for an indefinite period of time.

In the first phase, there is an absolute deficit in labour. There is an excess of available land which would remain uncultivated. Access to land, even though in excess supply, is neither equal nor unrestricted. Apart from appointing or changing the members of the rentier class, the state does not concern itself with the process of land allocation or agrarian production. The second phase is the subsumption of all arable land by the labour force. The phase of absolute deficit of labour force is terminated in this stage. Adnan characterizes this phase of population growth as a relative deficit in population because of the continuous demand for labour with respect to intensive cultivation under the backward and rudimentary technology of cultivation. This "pushes the labour productivity at the intensive margin to zero, on the one hand, and drives the share of out-put of the working peasantry as close to subsistence levels as possible" (p. 214), on the other. Further application of labour no longer adds to total agrarian out-puts, i.e., consistency between the productive structure of rent appropriation and further growth of the labour force does not exist any more. Notwithstanding, the generation of the labour force continues.

Under these circumstances, no macro level incentives can be expected either for continued high fertility or for fertility decline. The households become multi-occupational with increasing proportions of family labour branching out into the tertiary sector, which is detached from the main arena of contention of the land-based economy. This situation, according to Adnan, is "contingent on the requirements of increased family labour as a

means of ensuring material reproduction through the use of alternative spheres of production outside land-based agriculture" (p. 214). The very low returns of the tertiary sector and the absence of incentives from the macro level leave no choice to people other than the generation of labour force continuously for security and insurance against unemployment, old age, debilitation, etc. This continued generation of labour force to meet the subsistence requirements creates a huge surplus in population constituting the third phase — the phase of absolute surplus population. The phase of relative deficit in population is brought to an end.

Since these three phases cannot be distinctly separated historically, the partial overlapping of all these three analytical phases of population growth engenders a fertility regime peculiar to the peripheral formation, as in Bangladesh. He concludes that, like other societal processes, "the generation of absolute surplus population is not matched by macro-level demand for labour" (p. 219). Continued high fertility is, therefore, characterized by a structural autonomy unrelated to the requirements of agrarian production as the outcome of the absence of capitalist development in either agriculture or manufacture, the situation primarily created by the colonial metropolitan capital accumulation and the international market relations.

This conceptualization exposes some new insights in view of the necessary explanation required for the persistent high fertility in agrarian Bangladesh. However, problems with Adnan's formulation are twofold: First, discernment of the phases of capitalist development and associated fertility trends in the capitalist world seems to be similar to the classical model of demographic transition. The difference between these two formulations may be in his approach to the explanation of the relationship between capital and labour as the determining forces of demographic transition. Adnan takes the Marxist approach. He considers fertility as a terminal indicator of the broad alignment and realignment of the structural relations between demand and supply of labour in a given economic formation. His concern is with the examination of consistencies between structural implications for generation of labour and the broad trends in realized fertility levels. This relationship may not always hold true, as we know that in some developed

countries in the West, the demographic transition development took different routes. However, he stresses that his formulation does not posit a crude economic determinism, and attempts to explain only the general direction of fertility trends (p. 205). He also points out that his elaboration for the capitalist countries is intended for the development of concepts and categories that are necessary to formulate an analytical framework, which may need further historical and substantive examination, in order to explain the fertility process in the peripheral formations, specifically in the context of Bangladesh.

The second problem is related to the absence of any mention of the role of culture in determining the course of generation of surplus population. It may be assumed from Adnan's formulation that any given social formation generates some norms, values, beliefs and practices to which people would conform, but the significance of these cannot be comprehended when they prevail for a long time. Culture becomes, "in fact, the realm of those crucial institutions in which the ideas we live by are produced and through which they are communicated — and penetrate even the economy" (Worsley, 1984:60). Cultural institutions no longer remain as a separate or secondary sphere (i.e., superstructural) to the economic formations. In some instances, the cultural aspects seem to be stronger than the politico-economic relations of social production, despite its superstructural character in Marxian terms (e.g., the role of Muslim religiosity in justifying the high fertility trends in Bangladesh). In an aggregate level causal analysis of 1981 census data, Nurun Nabi (1990) finds Muslim religiosity to be the only significant determinant of both female age at marriage and fertility in Bangladesh. When Muslim religiosity was removed from the multivariate model, urbanization has only an indirect effect on fertility.

Side by side, economic variables, religion and traditional values play significant roles in shaping the behaviour of the people of the country. When it comes to an explanation of reproductive behaviour, the cultural aspects play a more important role than the economic ones. This does not mean that one should ignore the economic dimensions of the fertility process. For instance, the value of children in the agrarian economic structure is very important for economic reasons. But this also has some non-economic

manifestations. The value of children also lies in the psychological satisfaction they provide. The preference for sons is to keep the family lineage viable.

The religio-cultural institutions and the agrarian way of life have been in existence for several centuries in Bangladesh. In the course of time, the religious and the agrarian culture are diffused in such a way that crop and human reproduction have become synonymous to the rural people (Maloney et al., 1981:241). The interacting effects of agrarian relations and cultural institutions contribute significantly to the perpetuation of high fertility in the country by dictating early and universal marriage, unrestricted marital fertility, and seclusion of women inside the home or under *purdah* (veil). Therefore, the role of religion and culture must be taken into account along with relations and mode of production, and historical colonial heritage of the country.

C. Toward a Synthesis — A Political Demographic Perspective of Fertility

The situation of persistent high fertility accompanied by low levels of contraception in Bangladesh can be attempted to explain by the hypothesis of "cultural lag" advanced by Ogburn (1922). He made a distinction between material and non-material culture, and hypothesized that "changes in the adaptive culture (i.e., a part of the non-material culture) do not synchronize exactly with the changes in material culture and thus become a source of stresses and conflicts" (Bottomore, 1971:290). This is the current situation in Bangladesh. Changes have taken place in some of the material conditions with the diffusion of Western technology, but the ideas and ideologies associated with the diffused technology could not replace the old ones. In terms of reproductive behaviour, almost all persons in the country are aware of the existence of family planning programmes and the availability of modern contraceptives, but very few use them to limit childbirth. The persons who do use them start almost either at the end of the reproductive period or after already achieving a large family size, as indicated by the Contraceptive Prevalence Survey of 1983 that the current contraception use rate by eligible women peaked in the 35-39 age group in 1983 (Mitra and Kamal, 1985). The concept of cultural lag may also account for the inconclusive findings regarding the

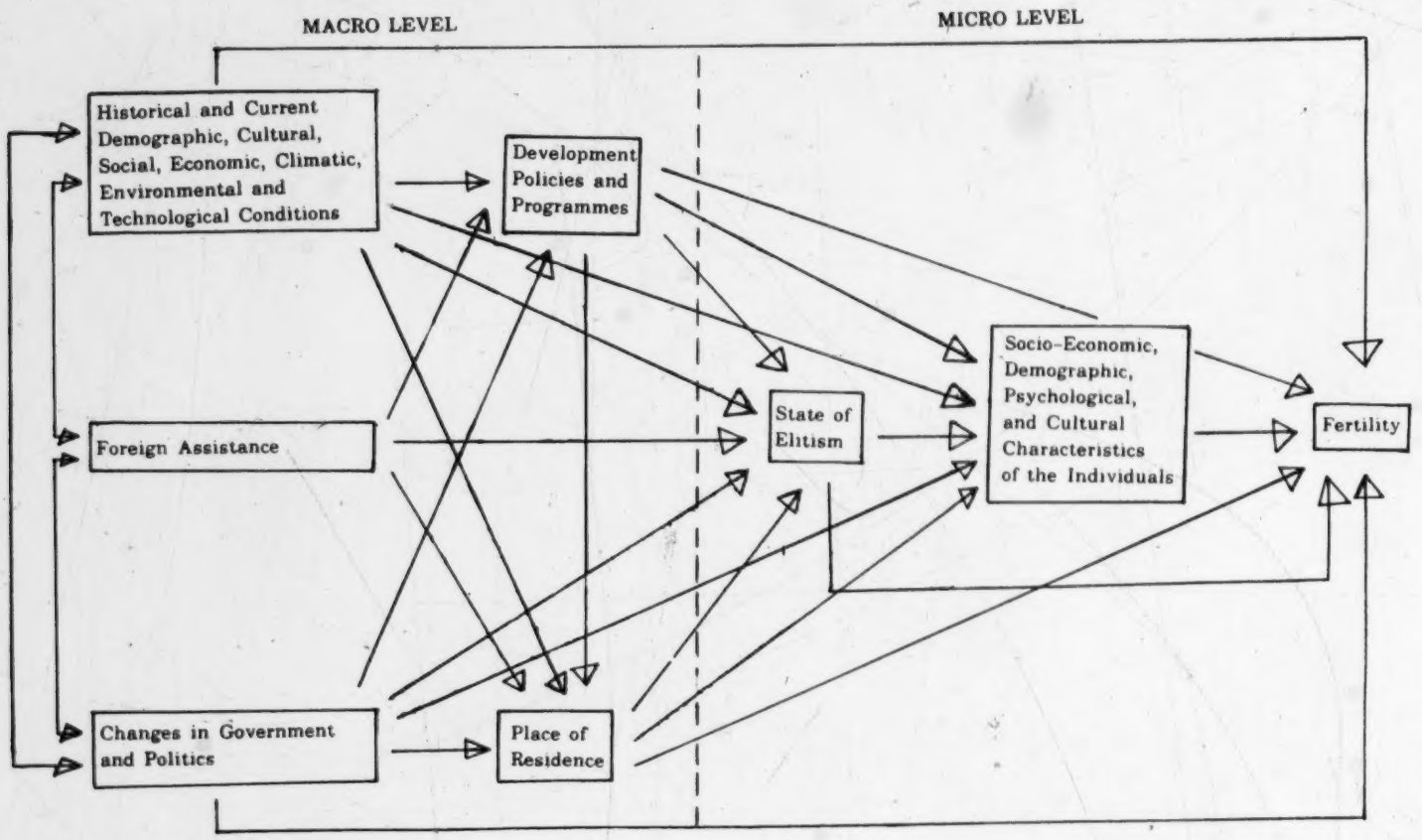
relationship of important variables (e.g., income, education and occupation) with fertility and contraceptive practice, and yet, it is inadequate to account for other macro-level factors (such as, the political and the demographic) in the causal explanation of high fertility in Bangladesh. The social demographic perspective is thus not an appropriate approach to study the dynamics of fertility in Bangladesh.

As elaborated earlier, high fertility and rapid population growth in Bangladesh involve several dimensions related to each other. High fertility may be a result of the existing socio-economic and religio-cultural institutions, but changes in these institutions are intertwined with other dimensions, such as government policy, changes in government and politics, and foreign aid. This complex situation cannot be explained sufficiently by just one single theory. As changes in the fertility behaviour of Bangladeshi people can only be adequately understood in relation to the changes in the whole social-structural context, it becomes necessary to bring in the applicable elements of major theories and previously unaccounted aspects into a multi-dimensional model exclusively applicable to Bangladesh. Therefore, we posit that all demographic processes including fertility are conditioned by the whole complex of social structure consisting of demographic (e.g., mortality, fertility, nuptiality, mobility, age structure), social (e.g., class structure and class relations, family structure and family formation), cultural (e.g., religion, norms, values, beliefs, customs), political (e.g., legislation, political action, state and government), economic (e.g., capital and labour relations, industry, market, labour force participation), technological (e.g., mass media, modern contraception), climatic (e.g., drought, cyclone, flood, etc.), environmental (e.g., pollution), and other external factors (e.g., colonization, foreign assistance, terms and conditions of international trade and market relations). The effects of these components are simultaneous with varying magnitude. Any change in one process is likely to influence others. The order of causal determination may differ from one social context to another.

This theoretical orientation can be put into a conceptual framework. Figure 1 presents the schematic portrayal of the analytical model of political demographic perspective of fertility in Bangladesh. The model combines both the macro and the micro

FIGURE 1

A CONCEPTUAL FRAMEWORK OF POLITICAL DEMOGRAPHIC PERSPECTIVE OF DIFFERENTIAL FERTILITY IN BANGLADESH


MACRO LEVEL
MICRO LEVEL
Historical and Current Demographic, Cultural, Social, Economic, Climatic, Environmental and Technological Conditions
Development Policies and Programmes
Foreign Assistance
State of Elitism
Socio-Economic, Demographic, Psychological, and Cultural Characteristics of the Individuals
Fertility
Changes in Government and Politics
Place of Residence

levels of generalization. The macro level refers to the contextual dimensions and the micro level, the individual level characteristics. It should be pointed out that the whole model cannot be statistically tested in this study due to unavailability of information, especially with reference to the contextual level variables. Based on the available data, a simple statistical model is developed and pursued later in this study for the analysis of the determinants of differential fertility.

According to the model, the effects of three exogenous dimensions on fertility filter through intervening endogenous dimensions. Historical and current social, economic, demographic, cultural, climatic, environmental and technological conditions of the country affect fertility directly. These conditions also affect fertility indirectly through development policies and programmes, place of residence, state of elitism and socio–economic, demographic and cultural characteristics of the individuals. In Bangladesh, the unequal hierarchical relations of people in society cause high fertility and internal migration. These also perpetuate high fertility indirectly by influencing the country's development programmes (e.g., rural development and land reforms). Because of the existing social relations and hierarchy, benefits go to a small group of people who control the social, economic and political power structure of the society. These, in turn, perpetuate the poor socio–economic conditions and cause the population regulation programmes to fail. Early and universal marriage, and dominance of Muslim religiosity compel people to enter into formal sexual union early causing high fertility and low contraception.

Foreign assistance has an equally important indirect effect through the same endogenous dimensions. Some donors/experts want to try certain strategies for development that worked well in the western context, while others want to see the programmes implemented in a manner that may have been successful in some other less developed countries. But due to differences in socio–cultural contexts and physiological complexion of people, the importation of development strategies does not work everywhere in the same manner. Disregarding these differences causes the population regulation programmes to have little impact on the fertility process. Foreign aid affects not only the

formulation of demographic policies and development programmes, but also the viability of the programmes through its scope in size and pace.

Changes in government and politics, through colonial and neo-colonial rules and military coups and counter-coups causing political and economic instability in the country, also have direct and indirect effects on the fertility process. Political instability creates doubt for the people about the credibility of the policies and programmes, and hence, the people's participation is jeopardized. Frequent changes in government and leadership hinder development programmes in terms of philosophy, continuity and efficacy.

With this conceptual framework in mind, this thesis investigates the determinants of differential fertility among social groups in rural and urban areas in Bangladesh. To identify the social groups, a composite index will be constructed by combining social, economic, demographic and other pertinent indicators. Three broad groups — non-elites, sub-elites and elites — will be identified. These three social groups may be compared to the so-called lower, middle and upper classes in society, but they are not classes in the sense of strictly Marxian or Weberian terms. A discussion on the distinction between Marxian and Weberian class structures and their applicability in Bangladesh is beyond the scope of this study, however, a simple *expose* is given below.

According to Marx ([1846, 1852 and 1894] in Tucker, 1978), class not only consists of a group of people with similar characteristics based on the relations to the means of production, but also has the same ideology and consciousness in preserving its own interests. One class must dominate and have a strong hold on the power structure. Such a class or class relation is difficult, if not impossible, to realize in Bangladesh. The ruling groups that control state power do not own the major means of production in the country. The group that has wealth does not invest in industrial development. The powerful bureaucrats are a mixture of people from all strata of the society. They appear to constitute a "middle class", whom Marx seemed to give less importance in his analysis.

Weber (1968 [1922] in Runciman, 1985), alternatively, recognizes these middle classes, and contends that property ownership is not the only source of power, prestige and domination in society. In Weber's terms, status groups are also a source of domination. They are founded upon relationships of consumption rather than production, and take the form of 'styles of life' that separate one group from another. They may be formed on the basis of life-style, inherited charisma, birth-right, formal education, monopoly of political or hierocratic domination. Thus, Weberian class does not possess a consciousness of common position and interests, which seems to be a purposeful departure from reality just to oppose Marxian analysis. Even if the society is dominated by the so-called middle-classes which consist of people from all strata, they possess a collective consciousness for themselves. For instance, the bureaucrats or the military groups do not compromise against the interests of their own group. Neither the Marxian nor the Weberian class analysis seems to single handedly apply to Bangladesh.[8]

The influence of external factors operating through the mass media and the family planning programme activities has significant bearing on fertility behaviour now, as well as in the future. The state of elitism seems to influence fertility behaviour more than the state of class consciousness in Bangladesh. The magnitude of the effect of elitism varies according to individual choice, not group consciousness. More precisely, the social elites in Bangladesh are an integration of political, cultural, economic and social hierarchy, which combines applicable elements of the Marxian and the Weberian class structures, and are partly independent of relations to the means of production and styles of life.

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[8] For an excellent discussion of the problems relating to the application of these two major theories of classes in the context of an agrarian society, see Stavenhagen (1975).

Chapter IV

DESCRIPTION OF THE DATA

A. Data Source

The data source for this study is the standard recode file (BD SR03) of the Bangladesh Fertility Survey (BFS), conducted during 1975–76 as a part of the World Fertility Survey (WFS) project of the International Statistical Institute (ISI). The standard recode file was created in the standard WFS format at the WFS headquarters from the edited questionnaire and individual country recode file (BD IN01) of the BFS. Corrections were made in the standard recode file for inconsistencies found in the individual country file. This may show some differences in the findings between the standard recode file and the previous publications generated from the original Bangladesh recode file.

The data were collected through a face-to-face interview with an individual questionnaire that contained 11 sections in the following order: respondents' background, marriage history, total pregnancy history, knowledge and use of contraception, fertility regulation, work history, current (last) husband's background, children's education and work, assets and expenditure, abortion, and height and weight. A detailed elaboration of the sample design and the method of data collection can be found in the First Country Report of the BFS (Population Control and Family Planning Division, 1978). Nonetheless, a brief description is in order.

Based on the recommendations contained in the WFS Sampling Manual, a three stage sample design was adopted for both rural and urban areas. The first two stages were involved with area selection. The selections were done with probability proportional to size (PPS). In the first stage, 160 primary sampling units (PSUs) for the rural, and 80 for the urban stratum were selected. Each PSU consisted of a few contiguous villages in rural and a few census blocks in the urban areas. In the second stage, one village from each rural and one census block from each urban PSU were selected. These form the secondary or intermediate sampling units (ISUs). Each of these ISUs consisted of 50

or more households. The third or the last stage of sampling involved the selection of the ultimate sampling units (USUs). A complete listing of households in each ISU was made and the households from each ISU were drawn with probability inversely proportional to the measure of size used in the selection of the respective PSU and ISU. The sample was thus theoretically self-weighting within each stratum of rural and urban areas. However, to obtain national and regional estimates, weighting was necessary. The weights for the national tables and estimates assigned to the rural and the urban areas were 1.194 and 0.347, respectively. For details on the method followed in obtaining the weights, see Population Control and Family Planning Division (1978).

A deliberate attempt to oversample the urban areas was made. The urban-rural population ratio in Bangladesh (according to the 1974 census, unadjusted for differential undercount) was 9.621 to 100. But the sample allocation for the urban and the rural areas was given a ratio of 1 to 3. Oversampling of the urban areas was done in order to obtain a reasonably large sample necessary for a separate study of the fertility behaviour of urban women.

The number of households selected from each ISU varied from 15 to 45 in rural areas and 5 to 29 in urban areas. A total of 6,145 households were selected, of which 4,626 were from rural and 1,519 from urban areas. Of the 6,145 selected households, 5,855 households — 4,437 in rural and 1,418 in urban areas — were successfully contacted with a non-contact rate of 4.7 per cent (4.1 and 6.6 per cent in rural and urban areas, respectively).

Ever-married women below 50 years of age, who slept in the household the night preceding the interview, were eligible as respondents for interview. A total of 6,648 eligible respondents (ERs) were identified in the household interviews, of which 5,123 were from rural and 1,525 from urban areas, but 5,024 individual respondents in rural, and 1,489 in urban areas (a total of 6,513) were interviewed successfully. The non-response rate was 2.0 per cent (1.9 and 2.4 per cent for rural and urban areas, respectively). Four respondents in rural and five in urban areas were deleted from the data set as a part of cleaning process of the data, resulting in a final sample size of 6,504.

For the purpose of this study, further cleaning was necessary. Not all of 6,504 cases contained complete information for the variables used in this study. Of the 6,504 cases, 6,098 were found to be complete. In other words, 406 (6.2 per cent) cases — 264 from rural, and 142 from urban areas — had incomplete information on some relevant variables. The simplest strategies to deal with missing information are either (a) to substitute values (e.g., mean) for the missing information, or (b) to delete the incomplete cases from the study alltogether. The deletion of incomplete cases was preferred to the mean value substitution strategy. In social science research, deletion of cases under 10 per cent of the total sample is acceptable as a rule of thumb on the assumption that it would not affect the data analysis very much. However, both strategies were tested through regression models. When the average values of the respective variables were substituted for the missing information in the incomplete cases, there was no significant improvement in the findings. The test with deletion of incomplete cases indicates better results, if one wanted to consider very minute changes in the statistical results.

The final sample size for this study thus consists of 6,098 cases, of which 4,756 are from rural and 1,342 from urban areas. The deletion of incomplete cases affected the proportionate rural and urban distributions slightly. The proportion of 77.2 and 22.8 per cent in the standard record file changed to 78.0 and 22.0 per cent for rural and urban areas, respectively.

B. Quality and Limitations of the Data

The quality of a data set generally points to the quality of the information obtained from the respondents. One aspect of it is the correct reporting of information by the respondents. Misreporting of information on some life time events due to memory lapse affects the quality of data. This is a major source of poor quality data in the context of the less developed countries. Bangladesh is no exception to that.

In Bangladesh, people are less likely to remember exact dates concerning year of birth, marriage, death and the like, because there is no formal requirement to produce documents pertaining to these events for official purposes. Since people are not required

to remember the dates of these events, memory lapse is an eventual outcome. High rates of illiteracy in the country aggravate the situation further. Lack of awareness among people about either remembering or keeping books on certain demographic events creates a situation where there is a greater chance of incorrect reporting of current age, age at marriage, age at which a certain child was born or died, and so on.

To meet the high standards set by the WFS, the BFS researchers took extra care in providing extensive training to the interviewers in order to obtain data as accurately as possible, but complete success could not be achieved. Most of the respondents failed to provide the dates of events in calender months and years. In assessing the quality of reporting in the country-specific WFS data, Scott and Singh (1981) find that in the BFS, only about 1.4 per cent of the total respondents could report their date of birth in calender "month and year", and only 0.7 per cent in "year only" (Table 4.1). The majority of the responses were stated in "years ago only" and "age only". Using the WFS computation programmes, these responses were imputed into calender months and years (for the detailed procedures for the imputation programmes, see Population Control and Family Planning Division, 1978). The imputation of dates naturally affects the accuracy of data when a large proportion of imputations are required and the dates rise sharply from the recent to the more distant past (Chidambaram et al., 1980). The situation in reporting of first age at marriage was little better. About 11.4 per cent could report their date of first marriage in "month and year". That is, reporting of age at marriage is more reliable than that of current age. Based on the results from the re-interview survey carried out approximately three months after the completion of the main field work (reported by Ahmad, 1979, cited in O'Muircheartaigh and Marckwardt, 1981:323), O'Muircheartaigh and Marckwardt (1981) conclude the same. Data presented in Table 4.1 suggest that reporting of information was not equally bad for all events; for some events, reporting was better than the others.

TABLE 4.1

PERCENTAGE DISTRIBUTION OF REPORTING OF DATES OF EVENTS BY RESPONDENTS IN THE BANGLADESH FERTILITY SURVEY, 1975-76

	Month & Year	Year Only	Years Ago Only	Age Only	Total Cases
Respondent's Date of Birth	1.4	0.7	—	97.9	6,515
Date of First Live-Birth	14.8	2.2	83.0	—	5,600
Date of Last Live-Birth	32.6	4.4	63.0	—	5,600
Date of First Marriage	11.4	2.2	19.6	66.8	6,513

Source: Scott and Singh (1981:17-94).

The quality of a data set should not be seen only in terms of correct reporting by the respondent, but also in terms of usefulness of the survey itself and the analytical value of the information obtained through the survey. It is impossible to quantify the extent of the analytical value of the BFS data set. However, several points can be made in that regard.

The necessity and usefulness of the whole WFS project were criticized by some scholars. The main argument against it was that the WFS project was a wastage of energy and resources. Demeny (1981) argues that it does not provide any new direction of thought in fertility analysis, nor does it generate any new knowledge to existing techniques in estimating fertility. Due to its application of strict standardization in questionnaire formulation and estimation of measures, Blake (1983:155) calls the WFS model as ... "in many ways, a caricature of research in the 'hard' sciences". Others (e.g., Brass, 1981:145) contend that the contribution of the WFS has been quite important. The organizers and the participants in the project maintain that the WFS provided a base of technical and financial assistance to the less developed countries, without which national level data collection with international comparison would be very difficult to achieve. To some (e.g., Miro, 1981:339), the collected data set provides "a wealth of cross-national data on fertility levels and differentials ... on a scale never experienced before", and a baseline for the stimulation of future research and knowledge on fertility. For an excellent account of these discussions, see the 1980 WFS Conference Proceedings (International Statistical Institute, 1981).

However, the BFS was intended to provide valuable data for evaluation, improvement and modification of the Government's population control programme. The specific objectives can be seen in Population Control and Family Planning Division (1978:3). It is not possible and necessary to examine all of the objectives here. Examining one objective, which is the most important with respect to this study, is sufficient to indicate the state of affairs. Objective 3 of the BFS was "to study fertility differentials in order to identify the factors likely to affect fertility". A close look at the variables included in the questionnaire indicates several limitations.

The socio-economic determinants of fertility were not given very much importance. This is a frequently voiced criticism of the WFS questionnaire. Miro (1981:344) critically opines that "the WFS really missed a golden opportunity to contribute with valuable data to future research on the socio-economic determinants of fertility ... when drawing the "community variables" module and the economic modules". The original intention of WFS was to obtain data on "contextual" variables based on the rationale (stated by Freedman [1974:7] in an early document) "that reproductive behaviour of couples is affected both by their personal characteristics and the social context (the emphasis is Miro's) in which they live and especially by some interaction or relation between the individual and the group characteristics". But, according to Miro, in the process of translating the "social context" into actual questions in a "module", the original rationale was lost. The thrust was placed on the measurement of the availability of certain physical facilities, including the access to public services.

The questionnaire does not contain any direct question on income. Instead, some indirect questions were asked to assess the economic status. The explanation given by the BFS designers for not including questions on income was: "Our pre-test experience also showed that it was very difficult to collect data on income and pay levels. The difficulty arises mostly due to lack of knowledge of monetary income on the part of Bangladeshi women rather than unwillingness to provide such information. We, therefore, attempted to measure economic status through indirect questions" (Population Control and Family Planning Division, 1978:33). It also does not provide detailed categorization of landholding size. In Bangladesh, where 92 per cent of the total population lives in rural areas, and 75 per cent of the labour force depends on agricultural occupations (at the time of the survey), detailed data on landholding size is very important. The question was asked in this manner: "Does/did your husband personally own any agricultural land ?" The responses were coded: 1=Yes, and 2=No. The "yes" or "no" response provides very limited analytical scope.

The quality of response to a question is also affected by problems related to the correct wording in the questionnaire. Any word used in a particular question must be precise and clear in the context of a society so that it allows proper measurement of the construct that the questions intend to tap. Some carelessness was noticed in this regard. In section 9 of the questionnaire, a question on frequency of animal protein (fish/meat) consumption was asked in this manner: "On how many days during the past week did you and your family (in this household) have meat or fish for your meal?" The responses were coded: 1=Never, 2=1-3 days, 3=4-6 days, 4=7 days. An examination reveals the weakness of the question. In a riverine country with monsoon climatic conditions such as Bangladesh, fish is much less expensive and easily obtainable than meat, especially in the rural areas. Putting fish and meat together in one question made the item less informative.

It is also important to know about the quantity of consumption. The amount of fish or meat consumption was not asked. The information gathered by the question generates a very loose and weak proxy measure for socio-economic status. Table 4.2 shows that about 25 per cent of the respondents consume fish or meat daily in the rural, and about 40 per cent in the urban areas. This seems to be rather unrealistic in one of the poorest countries in the world, where per capita income was around US $160 and 80 per cent of the population live below the poverty line. Asking two separate questions on fish and meat, or one question on meat only would have given a better picture, because consumption of meat is a more realistic reflection of socio-economic status.

Another question (in the same section) was asked to obtain the number of so-called modern objects (radio, boat, tea set, car, iron, television, bicycle, refrigerator, watch/clock, motor bicycle, sewing machine, bedstead) possessed by a household. According to Miro (1981:343), "the question appears somewhat loosely framed and at first sight it is difficult to discover the value of the information when no distinction is made between objects used and owned by the household as a whole and those of personal use". The question in the English version (a translated Bengali version of which was administered to the respondents) was: "I am mentioning you the names of some articles.

TABLE 4.2

DISTRIBUTION OF RESPONDENTS BY MEAT/FISH CONSUMPTION PER WEEK BY CURRENT PLACE OF RESIDENCE IN THE BANGLADESH FERTILITY SURVEY, 1975-76

Value Label	Number of Cases	Percent	Valid Percent	Cumulative Percent
		Rural		
Never	1,055	21.0	21.0	21.0
1-3 Days	1,736	34.6	34.6	55.7
4-6 Days	981	19.5	19.6	75.2
Daily	1,241	24.7	24.8	100.0
Not Stated	7	0.1	Missing	
Total	5,020	100.0	100.0	100.0
		Urban		
Never	254	17.1	17.2	17.2
1-3 Days	383	25.8	25.9	43.0
4-6 Days	256	17.3	17.3	60.3
Daily	587	39.6	39.7	100.0
Not Stated	4	0.3	Missing	
Total	1,484	100.0	100.0	100.0

Source: BFS data analyses.

Please tell me if you own these". In the Bengali version, the question was translated in such a way that the meaning of the word "own" became "have". There is a great difference between "having" and "owning". One may "have" or "possess" something, but may not "own" it. For instance, a government official uses a car from his office regularly, or a taxi-driver parks his taxi at his residence every night. From these kinds of possession, respondents may have thought that their husbands have cars, even if they do not own them. The meaning of ownership was not clear to the respondents.

The problem is not only with the differences between the meaning of "having" and "owning", but also with the word, *garhi*, used for car in the Bengali version. Generally, a *garhi* means not only a car, but may also refer to a bus, a truck, or a taxi to the people of Bangladesh, especially rural people with less education. Table 4.3 shows that 50.0 and 72.2 per cent of the respondents in rural areas, who had no education and worked in agricultural occupations, respectively, reported to own *garhis*. This is unrealistic in the context of rural Bangladesh. Quality of *garhi* is also in question. One may own a *garhi* which was bought in an auction and run for one's livelihood after some repairing. With that kind of *garhi*, there are always questions of the amount of money one earns and spends in repairing again. Finally, it may have happened that the *garhi* hardly ran because of mechanical reasons. In a situation like this, owning or possessing a *garhi* does not make any difference. It does not enhance one's economic status, neither does it contribute to one's outlook about life and childbearing. Ultimately, when the *garhi* does not run any more, the so-called *garhi* owner starts searching for work. In other words, this kind of *garhi* owner virtually becomes a hired labourer.

The occupation categories need more careful examination. For instance, professional and technical categories should be distinguished separately. Different professions have different statuses in this society, requiring different degrees of training and education. A doctor, a nurse, a university teacher, a primary school teacher, an engineer and a technician do not have the same level of training and education, and consequently, do not earn the same amount of income or have the same degree of prestige. Putting these people together in one category is not meaningful.

TABLE 4.3

DISTRIBUTION OF RESPONDENTS WHO OWNED CAR BY EDUCATION, OCCUPATION, AND CURRENT PLACE OF RESIDENCE IN THE BANGLADESH FERTILITY SURVEY, 1975-76

Variables	Rural		Urban	
	Cases	Percent	Cases	Percent
Education				
No Education	9	50.0	—	—
Below Primary	—	—	3	10.7
Primary	1	5.6	1	3.6
Below Secondary	6	33.4	6	21.4
Secondary	1	5.6	4	14.3
Post Secondary	1	5.6	14	50.0
Total	18	100.0	28	100.0
Occupation				
No Work	—	—	—	—
Household	—	—	—	—
Agricultural	13	72.2	—	—
Skilled-Unskilled	1	5.6	1	3.6
Services	—	—	—	—
Sales	3	16.7	22	78.6
Clerical	—	—	—	—
Professional	1	5.6	5	17.9
Total	18	100.0	28	100.0

Source: BFS data analyses.

The whole format of the questionnaire seems to be more applicable to the developed countries than the less developed countries. This may have arisen from the use of a set of core questionnaire primarily prepared by Western researchers. Although each participating country was allowed to modify the set of core questionnaire, the extent of this liberty may have been affected by the imposition of strict standards to allow for international comparability.

Although the quality of the BFS data set can be disputed, and the problems noted above may appear significant, it is still possible to obtain a reasonable indication of the dynamics of fertility in Bangladesh by analysing the BFS data set. Although it could have been better, it can be said that overall the BFS provides better quality data (in terms of obtained responses) when compared to the data collected through other sub-national surveys in the past.

Chapter V

CONSTRUCTION OF THE COMPOSITE INDEX OF ELITISM

A. Selection of the Indicators of Elitism

The selection of indicators to be used in constructing a composite index depends on the explanation the index is to render. A set of variables used in explaining a market situation in business may not be relevant in explaining social or psychological behaviour unrelated to business. In other words, the purpose of an index determines the selection of indicators to form the index of interest.

In regard to the purpose of this study, which attempts to explain human reproductive behaviour by differentiating people according to social hierarchy, choosing variables for the index of elitism is a very difficult task. A definite set of indicators cannot be used universally because of the historical and societal variations in their meaning and significance. For instance, with a sufficiently specific definition, occupation can be regarded as probably the best single index by which it is feasible to be employed in large-scale statistical inquiries (Centers, 1950:15; and Mayer, 1955:69). But existing occupational categorization systems vary widely both with respect to the number of groups they distinguish, and with respect to the criteria on which the categorization is constructed. Wrong (1980) considered a combination of occupation and income as a better objective measure of class position than occupation alone. In their study of social class in America, Warner et al. (1960) started with a combination of occupation, education, amount and source of income, house type and dwelling area. In the final analysis, they used occupation, source of income, housing type and dwelling area to construct an index of social class.

The status characteristics used by Warner et al. cannot be taken as a standard for Bangladesh for two reasons. First, they found that education produced a negative weight for social class position, while in Bangladesh, education seems to be the best correlate of socio-economic status position, as it tends to determine high prestige occupations. Second, there are restrictions posed by the data set. For instance, the BFS

furnishes data on simple ownership of house and additional houses. Simple house ownership in Bangladesh does not indicate one's real status, especially in rural areas. According to the BFS data, 68.1 per cent of the respondents own a house. The type and quality of the house are more important reflections of status. In rural Bangladesh, a thatched hut made of straw, bamboo, mud and unburned brick is considered to be a house, and most of the people own this kind of dwelling. According to the 1981 census, 83.4 per cent of the dwelling units had wall materials of either straw, bamboo, mud or unburned brick. The proportions for rural and urban areas are 86.5 and 63.5 per cent, respectively.

Only a few studies have assessed plausible indicators of socio-economic status (SES) in Bangladesh. Jalil (1987) makes reference to three studies (Bangladesh Rural Advancement Committee, 1978; D'souza and Bhuiya, 1982; Hossain and Phillips, 1984). His review reveals that all three studies used almost the same set of indicators to measure SES. The Bangladesh Rural Advancement Committee (1978) uses landholding size, occupation of the household head, income, area of housing unit, and ownerships of shop, cattle, and household articles (such as bedstead, chair, table, etc.). D'souza and Bhuiya (1982) add years of schooling of head or mother of the household, use of fixed latrine, source of drinking water and type of dwelling structure, and exclude income and ownerships of land and shop. Hossain and Phillips (1984) use land ownership and the possession of both male and female latrines. Income and shop ownership remained excluded.

Jalil (1987) contends that while Hossain and Phillips tested the unique appropriateness of the joint explanatory power of the indicators through factor analysis, the studies by Bangladesh Rural Advancement Committee and D'Souza and Bhuiya did not. Hossain and Phillips left the factors uninterpreted. Jalil uses the same set of variables used by Hossain and Phillips, except that he modified the possession of cattle and household articles into a variable called cash by combining the monetary value of modern things (such as bicycle, watch, blanket, etc.) owned by the households. Anticipating multicollinearity, he drops possession of female latrine and cash. The decision to delete

the indicators of possession of female latrine and cash based on zero order correlation coefficients to avoid multicollinearity can be methodologically incorrect, since it is not necessary that a high zero-order correlation always results in multicollinearity. He did not do any diagnostics to justify the decision.

When factor analysis is involved in the interpretation of factors, elimination of certain indicators is generally based on the factor loadings, not the correlation coefficients. In addition, despite a lack of statistical significance, certain indicators often need to be kept in the analysis due to their relatively greater theoretical importance. Based on a factor analysis of the remaining variables, he interprets that occupation and years of schooling of the household head, agricultural land ownership, and area of dwelling unit indicate economic status; possession of male latrine, wall and roof materials of dwelling unit indicate living environment; and source of drinking water indicates source of drinking water. What Jalil means by the interpretation of the last factor is not clear. He states, "the last factor is highly associated with only one observed variable, SODW [source of drinking water]. Thus the third and last factor may remain same like SODW" (p.38). It could be interpreted as an indicator of modernization or social development. Probably, due to the absence of a theoretical purpose in his study makes the interpretation of the factors unclear and crude.

Before selecting the indicators, a substantive question needs to be answered. It is important to determine *a priori* whether the variables to be selected determine the social hierarchy, or the social hierarchy produces the observable characteristics. For some variables, it works both ways. For instance, occupational prestige determines position in the social hierarchy, and social hierarchy also indicates higher occupational prestige. But while contraception may be a behavioural characteristic of the people from upper social stratum, it may not be expected to determine the social position. The selection of variables depends on the approach one takes. In this study, the variables to be selected are considered as indicators, not predictors, of the social group position.

On the basis of theoretical importance, substantive reasoning, and the available data, six indicators have been selected for the construction of the composite index of elitism. The indicators are: education, occupational prestige, possession of modern objects and cattle, consumption of animal protein (i.e., fish/meat consumption per week) and use of efficient methods of contraception. The selection of the indicators was done in a manner so that they would provide equal weights for both rural and urban areas. For instance, the possession of modern objects would be higher in urban than in rural areas. This is balanced by the possession of cattle which is greater in rural than in urban areas.

Education and occupational prestige of the husband are used instead of the respondent's. The literature reviewed earlier indicate that education and occupation of the household head could be used. Household heads in Bangladesh generally are husbands. In exceptional cases, (for a household with a widowed or divorced woman as head), the education and occupation of the female household head has been used (e.g., D'souza and Bhuiya, 1982). We prefer to use husband's (late or divorced) education and occupational prestige, because in a traditional society such as Bangladesh, women ordinarily occupy the same social position as their husbands. In their study of social class in America, Warner et al. (1960) used the husband's status characteristics with the same reasoning to determine the index of social class even if the subject was a woman. However, in the multivariate analyses, the respondent's characteristics will be used in the determination of factors responsible for differential fertility among the social groups in this study.

1. Measurement of the indicators

Indicators used in an index are generally measured on an interval scale. The indicators chosen for the construction of the index of elitism in this study are measured in different scales. Education and possession of cattle are continuous variables, and hence, have interval scales of measurement. Although presented in ordinal form, fish/meat consumption and use of efficient methods of contraception are measured in

nominal scales. Occupation is a nominal variable where categories of different occupations are presented. Possession of modern objects is measured as a dichotomy for 12 articles (radio, boat, tea set, car, iron, television, bicycle, refrigerator, watch/clock, motor bicycle, sewing machine, and bedstead). The possession of modern objects thus deals with 12 dichotomous variables.

The requirement of having interval level measurement in index construction can be relaxed in the case of ordinal variables if one assumes an equal interval between the order of the categories. Placement and ordering of the categories in fish/meat consumption and the use of efficient methods of contraception variables imply qualitative, if not quantitative, equality in distance between each interval.[9] Through recoding, occupation was transformed into an ordinal variable. This enabled us to accommodate this variable in the index. The 12 dichotomies of possession of modern objects were transformed into an index of modern objects possessed, which becomes a continuous variable. This was done by assigning average money value based on the price level at the time of the survey to each of the articles and then summing them. The new variable ranges from Tk.0.00 (owning nothing) to Tk.30,200.00 (owning all the articles, except a car). The average money value assigned to each of the items is presented in Table A.5.1 in the Appendix. The car was taken out of the index for two reasons: first, the value of a car is so high that it generates an extremely skewed distribution; second, the information pertaining to this item is problematic, as elaborated previously.

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[9] Equal interval in a continuum may be subjected to technical, judgemental and philosophical questions. The equality of the interval in a continuous variable may easily be questioned even if the variable is continuous with equal intervals in the strictest sense of the term. For instance, is the difference between the schooling of grades 1 and 2 equal to the difference between grades 11 and 12? The answer is "yes" and "no". Quantitatively, "yes". But qualitatively, "no". Which answer one should take depends on the aspects on which one puts emphasis. For a statistician or mathematician, the quantitative aspects may be of great importance. On the other hand, a social scientist may prefer the qualitative aspects over the quantitative based on the theoretical importance of a variable or the personal judgement of the researcher based on knowledge and experience in the area, as well as on the society. Regardless, "in certain situations it would be quite possible to work with ordinal variables" (Sullivan and Feldman, 1979:82, note 1).

2. Correlations among the indicators

The general assumptions behind the construction of an index are: (a) that the indicators are expected to be positively correlated with each other; (b) that some indicators show stronger associations with some than with the others; (c) that the same indicators may not show a constant relationship (stronger/weaker) over time and space. The relationships among these indicators can be examined to see how well these assumptions hold.

Table 5.1 presents the zero-order correlation coefficients for the relationship among the indicators in rural and urban areas. The correlation matrices show that the associations among the indicators are not very strong in rural areas. The correlation between occupational prestige and cattle ownership is negative. In urban areas, the overall associations among the indicators are moderate, except for the correlation between cattle ownership and the rest of the indicators. The relationship of cattle ownership with occupational prestige and use of efficient methods of contraception is negative. The extent of the relationships among the indicators is higher in urban than in rural areas.

While the second and the third assumptions are upheld, the negative correlation of cattle ownership with occupational prestige in both rural and urban areas, and with use of efficient methods of contraception in urban areas violates the first assumption. It is not that one cannot construct an index which includes one negative correlation; however, the inclusion of an indicator with a negative correlation tends to weaken the predictive power of the index. The most commonly used strategy to improve an index is to remove the indicators that generate negative relationships from the analysis. However, the decision depends on the objective of the researcher and the theoretical importance of a particular indicator. If the purpose is to obtain a parsimonious index, the removal of an indicator with a negative relationship from the index would be a logical choice. But if the purpose is to obtain a meaningful index with relatively less statistical parsimony, so to speak, keeping the indicator(s) in question in the index would be a right choice. In traditional Bangladesh, where few indicators are appropriately measured, meaningful relevance is to be preferred over statistical parsimony.

TABLE 5.1

CORRELATION MATRICES OF THE INDICATORS USED TO CONSTRUCT THE COMPOSITE INDEX OF ELITISM: BANGLADESH 1975-76

Rural

Variables	X1	X2	X3	X4	X5	X6
X1	1.000	.365***	.288***	.245***	.140***	.142***
X2		1.000	.138***	.083***	.072***	-.054***
X3			1.000	.196***	.111***	.191***
X4				1.000	.038**	.171***
X5					1.000	.043***
X6						1.000

Urban

Variables	X1	X2	X3	X4	X5	X6
X1	1.000	.588***	.407***	.370***	.385***	.082***
X2		1.000	.279***	.301***	.329***	-.039
X3			1.000	.288***	.299***	.206***
X4				1.000	.185**	.098***
X5					1.000	-.039
X6						1.000

Source: BFS data analyses.

Note: X1 = Husband's Education.
X2 = Husband's Occupational Prestige.
X3 = Possession of Modern Objects.
X4 = Animal Protein Consumption per Week.
X5 = Use of Efficient Contraception.
X6 = Cattle Ownership.

*** P <.001; ** P <.01; * P <.05

The negative correlation of cattle ownership with occupational prestige in rural areas, and occupational prestige and contraception efficiency in urban areas are quite consistent with the reality of Bangladesh. Status and prestige in rural Bangladesh come from the amount of land people own. Cattle ownership is often considered to be a proxy measure of land ownership. As land ownership implies an agricultural occupation, people who own cattle are obviously expected to have low occupational prestige. Although the composite index score may seem to be contaminated somewhat by the negative association of cattle ownership with occupational prestige and the use of efficient methods of contraception, the index would predict the dependent variable more realistically. Therefore, keeping cattle ownership is seen as more logical than removing it from the index.

B. Obtaining the Composite Index Scores of Elitism

Obtaining a distribution of the total composite score for each respondent can be accomplished by summing the values of the selected indicators assigned to each respondent, assuming that every indicator has an equal contribution to the index. But we know that each indicator does not have equal impact on the index being computed. The assigned values or ratings need to be weighted. How do we determine the weights? Principal axis factoring (one of the strategies used in factor analysis to extract initial factors) has been used to obtain the best linear combination of the observed variables in order to determine the weights of the indicators. The principal axis factoring procedure "uses the decomposition strategies of principal components analysis as applied to the adjusted correlation matrix whose diagonal elements (of 1) are replaced by corresponding estimates of communalities" (Kim and Mueller 1978:21). The generated factor loadings in the factor matrix indicate the correlation between the hypothesized factor(s) and the indicators. For our purpose, respective factor loading of the first component in the factor matrix (unrotated) is considered as the weight for the respective indicator.

The factor loadings for both rural and urban areas are presented in Table 5.2. Education shows the highest correlation with the index of elitism (the hypothesized factor) in both rural and urban areas. Use of efficient methods of contraception in rural, and cattle ownership in urban areas show the lowest correlationship. These weights for each of the indicators are multiplied by the values or ratings of the indicators for each respondent. The weighted products are then summed to obtain the total score for each individual. That is, the total scores or the index scores of elitism are obtained by combining the raw variables with weights that are proportional to their component (factor) loadings (Kim and Mueller 1978:78). This can be expressed as follows:

$$TISE = \Sigma\, RiWi \qquad (i=1, \ldots, 6), \qquad (1)$$

where, TISE = total index scores of elitism

Ri = rating by each indicator

Wi = weight for the indicator

C. Identification of Social Groups: Non–Elites, Sub–Elites and Elites

On the basis of the position of individuals on the index of elitism scale, we can classify respondents into groups. This involves two issues: first, the number of groups to be identified; second, delimiting the cut off points by which the groups can be identified. For the purpose of this study, three broad social groups — elites, sub–elites and non–elites — are postulated.[10] The non–elites are expected to be at the lower end of the scale, and constitute the vast majority of the population with the highest level of fertility. The elites are expected to be at the top of the scale. This group constitutes the lowest proportion in the population and is expected to have the lowest level of fertility. The sub–elites fall in between the elites and the non–elites. That is, this group lies on the middle portion of the scale. This group contains a large proportion of the population, but

[10] As many groups can be identified as one wishes depending on the objectives of research. To examine differential fertility and its determinants, identification of more than three groups would not be very helpful, as high fertility is expected to be prevalent across all sectors of the society.

TABLE 5.2

DERIVED FACTOR LOADINGS BY INDICATORS USED TO CONSTRUCT THE COMPOSITE INDEX OF ELITISM, BANGLADESH 1975–76

Indicators	Rural	Urban
Husband's Education	.73347	.83321
Husband's Occupational Prestige	.37155	.65387
Possession of Modern Objects	.48070	.54103
Meat or Fish Consumption per Week	.36239	.46339
Use of Efficient Contraception	.19123	.47839
Possession of Cattle	.23536	.09772

Source: BFS data analyses.

not as high as the non-elites, and its fertility level is expected to be intermediate to the elites and the non-elites.

The second issue relating to delimiting the groups poses a difficulty. How do we determine the cut off points by which the groups can be identified? The application of the theory of normal distribution can be considered. That is, people falling one standard deviation below the mean constitute the non-elites group, and those one standard deviation above constitute the elites; and people in between would fall in the sub-elites category. But the distribution of our index of elitism scale is highly skewed, which violates the assumption of normality. Thus, this strategy cannot be utilized. As an alternative, some standard criteria, which will be outlined before categorization, can be used to determine the cut off points. To the best of this author's knowledge, the available literature on Bangladesh fails to provide any suggestion on how to proceed in this task.

In such a situation, knowledge and experience of the society, plus common sense can provide useful guidelines. As each group has a certain position in the social hierarchy, ideal typical characteristics of the social groups can be envisaged. These ideal typical characteristics can be used as criteria to make cut off points in the index of elitism scale. We know that the two extreme groups are expected to possess the extreme attributes of the indicators and the sub-elites must share the middle position.

An outline of the expected characteristics of the groups is presented in Table 5.3. It should be kept in mind that these are the attributes expected in an ideal type situation. In reality, the combinations may be different. An elite person may have higher education and occupational prestige, but possess no expensive modern object; another may use highly efficient contraception while having a low level of education. The specificity and rationale in sketching the ideal typical groups are elaborated below.

Non-Elites: The non-elites are expected to have no more than four years of schooling. Most people in the non-elite category in Bangladesh have no education at all. A few start schooling, but invariably fail to finish the fifth grade (i.e., the primary level). By the time they reach the fifth grade, the

TABLE 5.3

EXPECTED IDEAL TYPE CHARACTERISTICS FOR THE SOCIAL GROUPS, BANGLADESH

Indicators	Non-Elites	Sub-Elites	Elites
Husband's Education	No Schooling to Below Primary	Primary to Below Secondary	Secondary and Above
Husband's Occupational Prestige	No Work, Household, Skilled-Unskilled, and Agricultural	Services, Sales and Clerical	Professional and Technical
Use of Efficient Contraception	Non-User	Non-Efficient Methods	Efficient Methods Only
Possession of Modern Objects	None	Watch/Clock, Radio, Bedstead, Tea Set, Bicycle and Boat	Sewing Machine, TV, Refrigerator and Motor Cycle
Possession of Cattle	Two or Less	Three to Nine	Ten or More
Frequency of Meat or Fish/Week	Three Days or Less per Week	Four to Six Days per Week	Everyday

necessity to enter the labour force becomes unavoidable. Cain's (1977) study shows that children start contributing their labour to their families as early as age ten. Schooling does not provide any incentive to them. Occupation is related to education. As members of this group have an education of less than primary level, they are expected to be involved in very low social prestige oriented jobs with agricultural, household, and skilled and unskilled labourer occupations.

Related to the lowest level of education and occupational prestige is the possession of certain types of modern objects. People in this group are not likely to possess a single "modern object". Accumulating surplus money in order to own and maintain any modern item is impossible for this group, because subsistence is an everyday struggle. Most people do not own any cattle for the same reason. Some may possess one or two cattle, but it should be noted that possession does not always mean owning. Possession may arise from inheritance, or a loan from the landlords, whose land they cultivate.

With regard to animal protein consumption, it is generally expected that people in this group may consume fish/meat once a week at the most. But with the measurement problem of the indicator (elaborated earlier), we expect people in this group to have a frequency of animal protein consumption of three days or less per week. Fish or meat consumption three days a week seems to be out of line for people in this group. But the indicator has been measured in the data set in a way that we are forced to make this allowance. With all these characteristics, it may be reasonable to expect that people of this group will not practice any kind of contraception.[11]

[11] However, it is known that a good proportion of the contraceptors (especially the adoptors of clinical sterilization) have been from the lower stratum of the society. They are considered as contraceptive elites and qualified to be included in the elite category.

Sub-Elites: This group consists of people who have between five and nine years of schooling.[12] With slightly better economic status relative to the non-elites, children try to continue schooling after fifth grade. But eventually, it becomes difficult for them to continue because of (a) lack of educational facilities; and (b) pressure from the family to join the labour force. With the level of education and training they have, social prestige achieved through their attained occupational status is not very high. Consequently, such people are involved in services, sales and clerical occupations. People in this group possess some modern objects such as watch/clock, radio, bedstead, tea set, bicycle, and boat. In rural areas, households in this group are expected to possess three to nine cattle (a combination of bulls and cows). People are also expected to consume animal protein four to six days a week, on average. The use of non-efficient contraceptive methods is the norm in this group.

Elites: The elites are expected to have ten years or more of schooling.[13] Members of this group have highly prestigious jobs in professional and technical occupations, and have the ability to possess some or all of the modern objects. However, to delimit the group, we consider the most expensive items such as sewing machine, television, refrigerator, and motor bicycle, as they are expected to be possessed by the elites. Accordingly, in the rural areas, the people in this group possess more than ten cattle. As the possession of cattle is taken as a proxy for land ownership, ten cattle will mean a land holding that requires at least five ploughs to cultivate. A rural household with five or more ploughs certainly indicates a high social status. People in the upper stratum generally consume animal protein on a regular basis; therefore, daily fish/meat

[12] Actually, this range could be extended to twelfth grade, but in view of the data set we decided to limit it to ninth grade.

[13] Ten years or more of schooling may not be an appropriate characteristic of this group. Actually, to be in the upper stratum of the society, at least fourteen to sixteen years of schooling is necessary. But from the data set, people with fourteen to sixteen years of schooling cannot be distinguished, as the highest level of education was coded as eleven and more years of schooling.

consumption is regarded as a strong reflection of being an elite. In terms of contraception, elite people are expected to use efficient methods of contraception.

Based on the expected characteristics, the ideal typical social groups are identified (the distribution of which is presented in Table 5.4). But the problem relating to categorizing people into groups empirically is not resolved yet, because (a) the scales of these indicators are not equal; (b) the composite index scale is in standardized form; and (c) the criteria based on the expected characteristics of the groups are in metric form. To overcome this problem, the following solution is adopted, which involves five steps:

Step One: The total population is divided into three groups based on the ideal typical characteristics.

Step Two: Since indicators have unequal contribution to the index, each group is multiplied by the weights for the respective indicator obtained from the first component (unrotated) of the principal axis factoring procedure.

Step Three: To obtain a standardized scale of the total index scores of elitism (TISE), the sum of the weighted product is divided by the sum of the weights. This can be expressed as follows:

$$TISE = s/S = \Sigma\, RiWi/\ \Sigma\, Wi \qquad (i=1, \ldots, 6), \qquad (2)$$

where, TISE = total index scores of elitism

s = sum of the weighted product

S = sum of the weights

Ri = rating of the indicator

Wi = weight of the indicator

The TISE scale ranges from 1.0 to 3.0, implying that an ideal typical non-elite will have a standard score of 1.0 and an elite 3.0. But it is not determined yet at what point on the scale the state of non-elitism will end (and hence where the state of

TABLE 5.4

DISTRIBUTION OF IDEAL TYPICAL SOCIAL GROUPS BY INDICATORS AND CURRENT PLACE OF RESIDENCE, BANGLADESH 1975–76

Indicators	Residence	Non-Elites	Sub-Elites	Elites
Education	Rural	74.2 (3527)	19.0 (906)	6.8 (323)
	Urban	54.5 (731)	24.1 (323)	21.5 (288)
Occupational Prestige	Rural	83.5 (3969)	12.5 (593)	4.1 (194)
	Urban	48.7 (654)	39.3 (528)	11.9 (194)
Modern Objects	Rural	71.8 (3413)	26.8 (1274)	1.5 (69)
	Urban	49.8 (668)	38.5 (517)	11.7 (157)
Contraception	Rural	87.3 (4154)	6.3 (300)	6.3 (302)
	Urban	70.6 (948)	7.7 (104)	21.6 (290)
Consumption	Rural	55.3 (2632)	19.8 (944)	24.8 (1180)
	Urban	41.8 (561)	17.8 (239)	40.4 (542)
Cattle Possession	Rural	73.4 (3492)	24.5 (1164)	2.1 (100)
	Urban	89.6 (1203)	9.2 (124)	1.1 (15)

Note: Figures in parentheses are number of cases.
Sources: Tables A.5.8 through A.5.13 in the Appendix.

sub–elitism will begin), and where the state of elitism will begin (and hence where sub–elites end). A standard is, therefore, needed for each group.

Step Four: As two cut off points are needed to delimit the boundaries for the three social groups, the number of cut off points required is divided by the number of groups to be identified. Through this, a proportion of standard score (i.e., 2/3=0.7) for each group is obtained.

Step Five: By adding this proportion of the standard score to 1.0 (1.0+0.7=1.7) and subtracting it from 3.0 (3.0–0.7=2.3), the boundaries for the three states of elitism are established. That is, the proportion of the population below a score of 1.7 on the scale constitute the non–elites, above 2.3 the elites, and between 1.7 and 2.3, the sub–elites.

The distribution of the observed groups, i.e., the social elites abstracted through the index scores of elitism, for rural and urban areas is presented in Table 5.5. According to the distribution, 79.6 per cent of the population is non–elite, 14.9 per cent sub–elite, and 5.5 per cent elite in Bangladesh. The proportions are 84.8, 12.7 and 2.5 per cent for rural, and 61.0, 22.7 and 16.4 per cent for urban areas, respectively. Face validity of the distribution of the groups seems to indicate a satisfactory approximation to both reality and the ideal types. Although there are no means at hand to internally validate the index, the approximation of the ideal types can be examined by looking at their distributions against each of the indicators that comprise the index of elitism.

D. Validation of the Composite Index of Elitism and the Resulting Classification of Social Groups

Detailed distributions of the non–elites, the sub–elites and the elites by each indicator separately are presented in Tables A.5.2 through A.5.7 in the Appendix. These tables show that the majority of the population in the respective groups possesses the expected characteristics as depicted in the outline of the ideal types in Table 5.3. However, some exceptions are also noticed. For instance, Table A.5.3 shows that in rural

TABLE 5.5

OBSERVED DISTRIBUTION OF SOCIAL GROUPS BASED ON THE DERIVED INDEX SCORES OF ELITISM, BANGLADESH 1975–76

Residence	Non-Elites (N)	Sub-Elites (N)	Elites (N)	Total (N)
Rural	84.5 (4020)	13.3 (632)	2.2 (104)	100.0 (4756)
Urban	61.3 (823)	22.6 (303)	16.1 (216)	100.0 (1342)
National	79.4 (4843)	15.3 (935)	5.2 (320)	100.0 (6098)

Source: BFS data analyses.

areas, 7.9 per cent of the non-elites are in sales, and 46.4 and 15.5 per cent of the sub-elites are in agricultural and professional occupations respectively, and 12.5 per cent of the elites have agricultural occupations. This is not surprising, because in the ideal typical distribution, the population is divided by each indicator which does not account for the overlap that occurs due to the fact that the same persons may not have all the expected characteristics to be located in a certain social group (i.e., individuals who do not have high education, may have high income, and vice versa). Since a composite index accounts for the overlap and categorizes people on a range of scores in the scale comprised of multiple indicators, these discrepancies are possible. While in a developed industrialized society, the difference between the ideal and the real group characteristics is not very wide, in a traditional agrarian society, the divergence is bound to be wide.

These deviations in observed characteristics from the ideal types can also be explained by the problems in measuring the indicators. We noted earlier that putting an engineer and a tube-well technician in the technical occupations, or a university and a primary school teacher in the same professional category indicates problems in measurement. Similarly, a sales person for a highly specialized company (e.g., a pharmaceutical company) is not the same as the sales person in a grocery shop in the rural areas. The unexpected 7.9 per cent with sales occupation in rural non-elite group was probably the sales persons in the rural grocery shop types; the 15.5 per cent of the rural sub-elites with professional occupations may be the professionals who are primary school teachers. The same can be said about the 12.5 per cent of rural elites with agricultural occupations. These observations suggest that the index controls for both the measurement problem and the overlap in the characteristics, and thereby approximates reality in Bangladesh satisfactorily.

The degree of approximation of group distribution by the index to the distribution of the groups by each indicator separately can also be examined. Detailed distributions of the groups showing what proportion of the elites obtained by each indicator constitutes the proportion of the elites abstracted through the composite index of elitism (presented in Tables A.5.8 through A.5.13 in the Appendix) indicate our procedures derive a good

approximation. To get a summary idea of the association between the distribution by each indicator separately and the distribution by the composite index, the Gamma coefficients (presented in Table 5.6) are examined. With few exceptions, they indicate strong correlations. The association is found to be generally higher in the urban areas. While substantial differences are found in occupational prestige, use of efficient methods of contraception and cattle ownership between rural and urban areas, education, modern objects and animal protein consumption show almost no difference. A very low coefficient for the distribution by cattle ownership in the urban areas is consistent with the expectation. The overall picture presented is that the composite index has provided a very close approximation to the ideal types discussed earlier. The reliability index (alpha = 0.64) indicates that the composite index of elitism is modestly reliable.

E. Socio-Demographic Characteristics of the Social Groups

The average levels and patterns of fertility, mortality, growth, nuptiality, education, labour force participation; distribution of women by religion and childhood place of residence for the groups are highlighted in the following discussion. Table 5.7 shows that for the total population, at national level, the average number of children ever born to Bangladeshi women is 4.0. It should be pointed out that the average number of children ever born generates a lower value of fertility level than the total fertility rate (TFR). According to the BFS (Population Control and Family Planning Division, 1978:108), the estimated TFR is 6.3. The difference occurs due to the fact that the measure of average number of children ever born includes women with no children in the denominator. The rural average is the same as that of the national level. Very little difference is found between the rural and the urban averages (4.0 and 3.9 respectively).

At the national level, non-elite, sub-elite and elite women have, on average, 4.0, 3.9 and 3.8 children, respectively. Although they show the expected pattern, the overall level is high and the differences between the groups are very small. A similar pattern is found in rural areas, with averages of 4.0, 3.8, and 3.6, for the non-elites, the sub-elites and the elites, respectively. While the national average falls progressively by 0.1 children

TABLE 5.6

GAMMA COEFFICIENTS OF THE RELATIONSHIP BETWEEN THE INDICATORS AND THE COMPOSITE INDEX OF ELITISM, BANGLADESH 1975-76

Indicators	Rural	Urban
Educational Elites	.97	.97
Occupational Elites	.78	.88
Modern Objects Elites	.90	.91
Contraception Elites	.52	.77
Consumption Elites	.72	.73
Cattle Elites	.59	.21

Sources: Tables A.5.8 through A.5.13 in the Appendix.

TABLE 5.7

AVERAGE NUMBER OF CHILDREN EVER BORN, DEAD, AND LIVING, TO EVER-MARRIED BANGLADESHI WOMEN, AGED 15-49 YEARS, BY SOCIAL GROUP AND CURRENT PLACE OF RESIDENCE, BANGLADESH 1975-76

Place of Residence	Non-Elites	Sub-Elites	Elites	Total
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
		Children Ever Born		
Rural	4.0 (3.118)	3.8 (3.007)	3.6 (2.812)	4.0 (3.098)
Urban	3.9 (2.984)	4.1 (3.239)	3.9 (3.110)	3.9 (3.063)
National	4.0 (3.096)	3.9 (3.087)	3.8 (3.014)	4.0 (3.091)
		Children Dead		
Rural	1.0 (1.401)	0.8 (1.286)	0.4 (0.799)	1.0 (1.386)
Urban	0.9 (1.276)	0.7 (1.052)	0.4 (0.853)	0.8 (1.185)
National	1.0 (1.381)	0.8 (1.216)	0.4 (0.835)	1.0 (1.343)
		Children Living		
Rural	3.0 (2.385)	3.0 (2.350)	3.2 (2.478)	3.0 (2.382)
Urban	2.9 (2.362)	3.4 (2.718)	3.4 (2.717)	3.1 (2.516)
National	3.0 (2.381)	3.1 (2.484)	3.4 (2.641)	3.0 (2.413)

Source: BFS data analyses.
Note: SD refers to standard deviation.

with the enhancement of group position, the rural average does so by 0.2 children. The pattern is curvilinear in urban areas: urban sub-elites have the highest fertility level with an average of 4.1 children ever born; non-elite and elite women have the same average number of children ever born to them. Each of these groups has an average of 3.9 children. That is, the fertility scenario among the urban groups portrays a picture that is contrary to expectations. The pattern does not follow a monotonically negative relationship with the groups, nor do the urban averages show lower levels than the rural ones. This is contrary to the popular contention that the fertility level is lower in urban areas and lowest among urban elites.

The mortality measure (the average number of children dead to the ever-married Bangladeshi women, aged 15-49 years) demonstrates that, on average, one child died for each ever-married woman in Bangladesh. The same is the case in rural areas. The urban child mortality level is slightly better — 0.8 children per woman. Child mortality levels display distinct patterns of negative association with group position in both rural and urban areas. While rural non-elites experience an average death of one child per woman, the elites experience 0.4 deaths; the level for the sub-elites is in-between (0.8 children per woman). Urban groups show a similar pattern with averages of 0.9, 0.7 and 0.4 children dead, respectively. Child mortality levels for the groups suggest that with the elevation of social status, a family is able to obtain better maternity and health care for the pregnant mother and the child, and consequently, reduce child mortality, which in turn tends to have a negative effect on completed fertility.

In the presence of high fertility levels, with very little difference between the groups, the low mortality levels produce a high rate of natural increase in the population. One would expect the elites to have the levels of fertility and mortality that are not only the lowest among all groups, but also tend to converge so that the growth rate becomes the lowest of all groups.[14] For Bangladesh, the rural elites have the lowest fertility, but not low enough to contribute to a low rate of growth. Rather, they have the highest

[14] Low growth rate is also possible with converging high birth and death rates (as was happening in the past).

growth rate in terms of average number of children living (a measure created by subtracting average number of children dead from average number of children ever born) in rural areas — 3.2 children per woman. Urban groups show a similar pattern in rates of growth, despite a curvilinear relationship between average number of children ever born and group position.

Overall, the urban non-elites generate the lowest average number of children living — 2.9 children per woman, and the urban sub-elites and the elites the highest, each group with an average of 3.4 children living. This is surprising with respect to the existing belief that a higher growth rate is associated with the rural people who possess large landholdings. However, it is not unrealistic, because the fertility level is high and mortality level low for all urban groups.

This is also contrary to the general belief that low child mortality tends to generate low fertility, especially for the elites. Two explanations can be put forward in this regard. First, despite relatively low child mortality, elites may still not be sure whether a desired number of children will survive. The anticipated child mortality, if not the observed one, may have played an important role in an advance replacement of children who may die in the future. This may be a reflection of the lack of access to and availability of health and child care facilities. Second, the overall child mortality level is not low enough to induce people to reproduce fewer children.

From Table 5.8, it can be seen that the average age at first marriage for Bangladeshi women is 12.4 years. There is not much of a difference between the rural (12.2 years) and the urban women (13.2 years) in this regard. On average, urban women have a higher age at first marriage than rural women by one year. As expected, age at first marriage shows a monotonically positive relationship with group position. The rural non-elites have the lowest and the urban elites the highest age at first marriage. Non-elite women get married earlier than the elite women. The ages at first marriage for non-elite, sub-elite and elite are 12.0, 12.9, and 12.5 years in rural, and 12.5, 13.5, and 15.6 years in urban areas, respectively. Despite a progressive increase in age at first marriage, the overall level is low even for the urban elites. Early and

TABLE 5.8

AVERAGE AGE AT FIRST MARRIAGE AND DURATION OF MARRIAGE FOR EVER-MARRIED BANGLADESHI WOMEN, AGED 15-49 YEARS, BY SOCIAL GROUP AND CURRENT PLACE OF RESIDENCE, BANGLADESH 1975-76

Place of Residence	Non-Elites Mean (SD)	Sub-Elites Mean (SD)	Elites Mean (SD)	Total Mean (SD)
	Age at First Marriage in Years			
Rural	12.0 (2.958)	12.9 (2.799)	13.8 (2.870)	12.2 (2.960)
Urban	12.6 (3.276)	13.5 (2.959)	15.6 (3.433)	13.2 (3.417)
National	12.1 (3.020)	13.1 (2.867)	15.0 (3.361)	12.4 (3.099)
	Duration of Marriage in Months			
Rural	181.9 (119.7)	165.3 (118.6)	144.0 (100.2)	178.9 (119.4)
Urban	168.5 (113.7)	167.9 (117.9)	149.5 (113.4)	165.3 (114.4)
National	179.6 (118.8)	165.9 (118.3)	147.7 (109.2)	175.9 (118.5)

Source: BFS data analyses.
Note: SD refers to standard deviation.

universal marriage is predominantly prescribed by the religious, cultural and social institutions of the society.

Because of a low age at first marriage and a low divorce rate (as shown in other sources), Bangladeshi ever-married women are expected to spend a relatively longer time in married state. Data in Table 5.8 demonstrate that, on average, Bangladeshi women spend 175.9 months (14.7 years) in marriage. As expected, urban women spend slightly over a year less than the rural ones. The rural and urban durations of marriage for women are 178.7 (14.9 years) and 165.3 months (13.8 years), respectively.

Among the social groups, a negative association between duration of marriage and group position is also observed in both rural and urban areas. Rural non-elites spend the longest time in a marital union (181.9 months [15.2 years]), and rural elites the shortest (144.0 months [12.0 years]). The differences between non-elites, sub-elites, and elites are substantial in rural areas, with average durations of marriage of 181.9 (15.2 years), 165.3 (13.8 years) and 144.0 months (12.0 years), respectively. Urban non-elite and sub-elite women have almost the same duration of married life — 168.5 and 167.9 months respectively (a difference of about half a month). Urban elite women spend 149.5 months (12.5 years) in a married state, a duration similar to the rural elites. However, despite having 1.8 years higher average age at first marriage than the rural elites, the urban elite women spend 5.5 months more in the married state than their rural counterparts.

The country is dominated by Muslims. Table 5.9 reveals that 83.3 per cent of the respondents are Muslim — 83.0 and 84.4 per cent for rural and urban areas, respectively. All social groups have a similar proportion Muslim. However, the rural sub-elites and elites have proportions (77.0 and 79.8 per cent respectively) that are relatively lower than the rural non-elites (84.1 per cent), urban non-elites (85.9 per cent), sub-elites (81.2 per cent) and elites (83.3 per cent).

Average schooling for women is found to be 1.2, 0.8 and 2.3 years at national, rural and urban areas, respectively (Table 5.9). As expected, the average level of schooling for the rural non-elites is precariously low — 0.4 years (the lowest). Urban

TABLE 5.9

PROPORTION MUSLIMS, AVERAGE YEARS OF SCHOOLING AND PROPORTION IN THE LABOUR FORCE FOR EVER-MARRIED BANGLADESHI WOMEN, AGED 15-49 YEARS, BY SOCIAL GROUP AND CURRENT PLACE OF RESIDENCE, BANGLADESH 1975-76

Place of Residence	Non-Elites	Sub-Elites	Elites	Total
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
		Proportion Muslims		
Rural	0.841 (0.366)	0.766 (0.424)	0.798 (0.403)	0.830 (0.376)
Urban	0.859 (0.348)	0.812 (0.391)	0.833 (0.374)	0.844 (0.363)
National	0.844 (0.363)	0.781 (0.414)	0.822 (0.383)	0.833 (0.373)
		Years of Schooling		
Rural	0.4 (1.304)	2.6 (2.706)	5.3 (2.895)	0.8 (1.892)
Urban	1.0 (0.708)	3.1 (3.065)	7.5 (3.100)	2.3 (3.397)
National	0.4 (1.388)	2.8 (2.833)	6.8 (3.197)	1.2 (2.390)
		Proportion in Labour Force		
Rural	0.140 (0.347)	0.033 (0.179)	0.058 (0.234)	0.124 (0.330)
Urban	0.204 (0.403)	0.059 (0.237)	0.116 (0.321)	0.157 (0.364)
National	0.151 (0.358)	0.042 (0.200)	0.097 (0.296)	0.132 (0.338)

Source: BFS data analyses.
Note: SD refers to standard deviation.

elites have the highest average level of education (7.5 years). Educational levels of women show a progressively increasing trend with the group position. Rural sub–elites and elites have average education of 2.6 and 5.3 years of schooling, respectively. For urban non–elites and sub–elites, the averages are 1.0 and 3.0 years, respectively.

Only 13.2 per cent of ever–married women in Bangladesh are involved in the labour force. The rural participation rate (12.4 per cent) is, as expected, lower than the urban rate (15.7 per cent), but the difference between these two areas is only 3.3 percentage points. That is, overall female labour force participation is very low, even when including the urban rate. The findings for the non–elite, the sub–elite, and the elite women expose an interesting and unexpected scenario. Generally, it is expected that labour force participation rate will have a positive relationship with group position. However, both rural and urban non–elite women show substantially higher participation rates (14.0 and 20.4 per cent respectively) than the elites. Labour force participation rates of 3.3 and 5.8 per cent, and 5.9 and 11.6 per cent are found for sub–elite and elite women in rural and urban areas, respectively.

The overall low level of female labour force participation may be a combination of two factors: (a) low status of women; and/or (b) lack of opportunities. Women are subjugated in their traditional role and are generally not allowed to work outside the home. However, in some cases, they are allowed to work outside the home in prestigious jobs. This is more true in the upper than in the lower stratum, as well as in the urban rather than in the rural areas. That is why the rate of labour force activity of urban elite women is relatively higher when compared with the rural elites. In rural areas, limited opportunities and the relatively stronger dominance of traditional values make it difficult for women to get involved in the labour force. But the situation for the non–elites, in both rural and urban areas, is slightly different. The traditional restrictions seem to be less dominant not because of their acceptance, but because of the economic need of the family.

Chapter VI

BIVARIATE ANALYSES OF DIFFERENTIAL FERTILITY

A. A Model of Determinants of Differential Fertility

Explaining human reproductive behaviour is not an easy task. Based on the literature reviewed and the nature of the data set available, a model for the determinants of differential fertility is specified using selected socio-economic and demographic variables. The correlates included in the model are women's level of education, labour force participation, age at first marriage, duration of marriage, childhood place of residence, child mortality (number of children dead), and Muslim religiosity (percentage of Muslim women). The dependent variable in the model is the cumulative fertility of women, measured by the number of children ever born to ever-married women of reproductive age.

It should be pointed out that the percentage of population Muslim is not a direct measure of Muslim religiosity. Religiosity implies religiousness, piety, or the regular practice of religious codes of conduct, but a person can possess a high degree of religiosity (as a state of mind) even without being a formal practitioner. In that sense, religious affiliation indirectly reflects a very close approximation to religiosity, and hence, in the context of Bangladesh, percentage of Muslims can be regarded as a satisfactory indicator of Muslim religiosity.

The specific hypotheses put forward in this study are as follows:

(a) the higher the education, the lower the number of children ever born to a woman;

(b) the higher the labour force participation, the lower the number of children ever born to a woman;

(c) the higher the age at first marriage, the lower the number of children ever born to a woman;

(d) the higher the duration of marriage, the higher the number of children ever born to a woman;

(e) Urban childhood place of residence is inversely related to the number of children ever born to a woman;

(f) the higher the number of children dead, the higher the number of children ever born to a woman;

(g) Muslim religiosity is positively related to the number of children ever born to a woman.

B. Findings

1. Female Education

Data on the average number of children ever born to Bangladeshi ever-married women by levels of female education (presented in Table 6.1) demonstrate a decrease in births with the increase in years of schooling through secondary levels. The average number of children ever born to women with no education is 4.2, followed by below primary (3.5), primary (3.2), below secondary (2.4) and secondary level (1.7). After that, the average increases to 3.2 for the women with post secondary education. The increase in the highest category was not predicted. This increase in the overall rural pattern for the women with the highest level of education occurs due to the pattern present in rural non-elite and sub-elite groups.

For rural non-elites, births decline steadily from 4.2 for no education to 2.0 for below secondary category. The average then jumps to 5.0 children for women with post secondary education. A similar pattern is seen for rural sub-elites. The average number of children ever born declines from 4.3 for women with no education to 1.7 with secondary education, and then jumps to 7.0, which is well above the level of women with no education. Unexpectedly high average number of children in the post secondary education category for both non-elite and sub-elite women in rural areas can be accounted for by the existence of outlying cases with extreme values (e.g., the existence of only one case with seven children for the rural sub-elites in this category). For rural elites, the average increases from 3.6 for women with no education to 4.8 for below primary, and then starts to decline steadily through post secondary education.

TABLE 6.1

AVERAGE NUMBER OF CHILDREN EVER BORN TO EVER-MARRIED BANGLADESHI WOMEN BY SOCIAL GROUP, LEVEL OF EDUCATION AND CURRENT PLACE OF RESIDENCE, BANGLADESH 1975-76

Level of Education	Non-Elites		Sub-Elites		Elites		Total	
	Mean (SD)	Percent (N)	Mean (SD)	Percent (N)	Mean (SD)	Percent (N)	Mean (SD)	Percent (N)
				Rural				
No Education	4.2 (3.126)	86.8 (3490)	4.3 (3.159)	43.2 (273)	3.6 (2.681)	13.5 (14)	4.2 (3.126)	79.4 (3777)
Below Primary (1-4 years)	3.3 (2.921)	9.7 (389)	3.7 (2.878)	25.2 (159)	4.8 (3.078)	12.5 (13)	3.5 (2.921)	11.8 (561)
Primary (5 years)	2.9 (2.890)	2.8 (112)	3.4 (2.729)	20.9 (132)	4.0 (2.576)	32.7 (34)	3.2 (2.793)	5.8 (278)
Below Secondary (6-9 years)	2.0 (2.791)	0.6 (25)	2.1 (2.555)	9.6 (61)	3.4 (2.978)	31.7 (33)	2.4 (2.767)	2.5 (119)
Secondary (10 years)	—	—	1.7 (1.211)	0.9 (6)	1.8 (2.490)	4.8 (5)	1.7 (1.794)	0.2 (11)
Post Secondary (11+ years)	5.0 (2.708)	0.1 (4)	7.0 (0.000)	0.2 (1)	1.0 (0.707)	4.8 (5)	3.2 (2.898)	0.2 (10)
Pearson's r¶	-.106***		-.205***		-.172***		-.124***	

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TABLE 6.1 Cont'd

Level of Education	Non-Elites Mean (SD)	Non-Elites Percent (N)	Sub-Elites Mean (SD)	Sub-Elites Percent (N)	Elites Mean (SD)	Elites Percent (N)	Total Mean (SD)	Total Percent (N)
				Urban				
No Education	4.0 (3.031)	81.5 (671)	4.8 (3.167)	41.6 (126)	6.4 (4.316)	5.6 (12)	4.2 (3.096)	60.3 (809)
Below Primary (1–4 years)	3.3 (2.625)	11.3 (93)	4.9 (3.195)	22.1 (67)	7.4 (3.650)	8.3 (18)	4.3 (3.210)	13.3 (178)
Primary (5 years)	3.3 (3.000)	5.0 (41)	3.5 (3.126)	19.5 (59)	5.4 (2.769)	14.8 (32)	3.9 (3.107)	9.8 (132)
Below Secondary (6–9 years)	1.9 (1.441)	1.6 (13)	2.2 (2.756)	12.5 (38)	3.7 (2.721)	33.3 (72)	3.1 (2..736)	9.2 (123)
Secondary (10 years)	0.5 (0.707)	0.2 (2)	1.8 (2.089)	3.6 (11)	2.7 (1.993)	19.0 (41)	2.4 (2.024)	4.0 (54)
Post Secondary (11+ years)	3.3 (2.517)	0.4 (3)	1.5 (0.707)	0.7 (2)	1.7 (1.521)	19.0 (41)	1.8 (1.586)	3.4 (46)
Pearson's r¶	-.121***		-.289***		-.529***		-.174***	

Source: BFS data analyses.
Note: SD refers to standard deviation and N to number of cases.
¶Correlation between education and fertility.

In urban areas, patterns in the relationship between educational levels and fertility for total, sub-elite and elite women are found to be similar to that of rural elites (a slight increase in the below primary level). This is not unusual in Bangladesh. The increase in fertility for the below primary education category can be explained by the fact that in least developed countries, a small increase in the level of schooling tends to cause a rise in fertility through the indirect effect of improved maternal health, or the practice of a shorter period of lactation and post-partum abstinence (Rodriguez and Cleland, 1981; United Nations Population Division, 1983). The pattern for urban non-elites is similar to that of rural non-elites and sub-elites.

Another feature demonstrated by the relationship is that the higher status groups (both in rural and urban areas) show higher fertility than the lower status groups for every category up to the secondary level of schooling. That is, the average number of children ever born to sub-elite women is relatively higher than that to non-elite women, and the average to elite women is higher than that to sub-elites in every category except the last one. For rural areas, this pattern is found from below primary to secondary educational levels. These results may imply (a) a greater influence of education on fertility in lower than in higher educated groups; and (b) an indirect result of the improved health of women in the upper stratum and relaxation of traditional fertility restraints, such as breastfeeding.

The correlation between education and fertility, demonstrated by Pearson's correlation coefficients, is negative for all groups, but the magnitude of associations are not great.[15] Only urban elite women show a high correlation with fertility ($r=-.529$, $p<.001$). The rural non-elites have the lowest correlation coefficient, but the rural elites, unexpectedly, have a lower coefficient than that of the rural sub-elites. Urban groups show a progressively increasing correlation with fertility.

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[15] Correlation matrices for variables considered in the model for rural and urban areas, and groups are presented in Tables A.6.1 through A.6.8 in the Appendix.

2. Female Labour Force Participation

Female labour force participation can affect fertility in many ways. As higher status occupations are related to higher education and training, the employment of women in occupations with higher social and economic prestige implies a shift of values from traditional to modern. This shift brings changes in the way of life, and generates a negative effect on fertility. Employment in occupations with low social and economic status (e.g., day labourer, agricultural worker, etc.) may also have a negative influence on fertility by creating a temporary separation between spouses. This effect seems to be spontaneous, without as yet modifying motivation towards childbearing. Therefore, it is expected that non-working women would have the highest fertility and women with professional occupations the lowest. Women with occupations of household, agricultural and skilled-unskilled labourers would also have relatively lower levels of fertility than the non-working women, but certainly higher than the women with professional and technical occupations.

The average number of children ever born to Bangladeshi women classified by their occupational status is presented in Table 6.2. The findings show an erratic pattern between occupational status and levels of fertility. This pattern is the same in both rural and urban areas. Surprisingly, rural non-elite women show a monotonic positive association between occupational status and fertility. Professional women have the highest average (5.0), and unemployed women the lowest (4.0). Rural sub-elite women demonstrate an erratic pattern. The highest average is found for women in sales (7.0). However, this category contains only one woman with seven children. The same is true for the service category, which shows the lowest average (2.0). Interestingly and unexpectedly, women with professional and agricultural occupations have the same average (4.0). Rural elites have respondents only in three categories (no work, services, and professional) showing a curvilinear relationship.

Urban non-elites also display an erratic pattern in the relationship. The lowest average (1.0) for women with agricultural occupations is the result of the existence of a single case with one child. For urban sub-elites, the highest average (5.0) is found for

TABLE 6.2

AVERAGE NUMBER OF CHILDREN EVER BORN TO EVER-MARRIED BANGLADESHI WOMEN BY SOCIAL GROUP, OCCUPATIONAL STATUS AND CURRENT PLACE OF RESIDENCE, BANGLADESH, 1975-76

Occupation Categories	Non-Elites Mean (SD)	Non-Elites Percent (N)	Sub-Elites Mean (SD)	Sub-Elites Percent (N)	Elites Mean (SD)	Elites Percent (N)	Total Mean (SD)	Total Percent (N)
				Rural				
No Work	4.0 (3.166)	86.0 (3456)	3.7 (3.013)	96.7 (611)	3.7 (2.852)	94.2 (98)	3.9 (3.138)	87.6 (4165)
Household	4.3 (2.705)	6.3 (255)	6.3 (1.527)	0.5 (3)	—	—	4.3 (2.701)	5.4 (258)
Agricultural	4.3 (2.882)	1.6 (64)	4.0 (0.000)	0.3 (2)	—	—	4.3 (2.835)	1.4 (66)
Skilled-Unskilled	4.4 (2.850)	5.2 (209)	3.4 (3.340)	1.6 (10)	—	—	4.3 (2.872)	4.6 (219)
Services	4.5 (2.646)	0.1 (4)	2.0 (0.000)	0.2 (1)	1.3 (0.577)	2.9 (3)	3.0 (2.390)	0.2 (8)
Sales	4.5 (3.106)	0.6 (24)	7.0 (0.000)	0.2 (1)	—	—	4.6 (2.390)	0.5 (25)
Clerical	—	—	—	—	—	—	—	—
Professional	5.0 (2.619)	0.2 (8)	4.0 (3.162)	0.6 (4)	3.3 (2.082)	2.9 (3)	4.4 (2.586)	0.3 (15)
Pearson's r¶	.040		.021		-.113		.040**	

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TABLE 6.2 Cont'd

Occupation Categories	Non-Elites Mean (SD)	Non-Elites Percent (N)	Sub-Elites Mean (SD)	Sub-Elites Percent (N)	Elites Mean (SD)	Elites Percent (N)	Total Mean (SD)	Total Percent (N)
				Urban				
No Work	3.9 (3.036)	79.6 (655)	4.1 (3.267)	94.1 (285)	3.9 (3.187)	88.4 (191)	3.9 (3.120)	84.3 (1131)
Household	3.9 (2.545)	14.5 (119)	4.3 (3.546)	2.3 (7)	—	—	4.0 (2.593)	9.4 (126)
Agricultural	1.0 (0.000)	0.1 (1)	—	—	—	—	1.0 (0.000)	0.1 (1)
Skilled-Unskilled	4.0 (3.559)	2.7 (22)	4.3 (2.732)	2.0 (6)	5.6 (2.074)	2.3 (5)	4.3 (3.216)	2.5 (33)
Services	2.2 (2.044)	1.2 (10)	—	—	2.0 (0.000)	0.5 (1)	2.2 (1.940)	0.8 (11)
Sales	4.4 (2.722)	1.0 (8)	5.0 (0.000)	0.3 (1)	—	—	4.4 (2.555)	0.7 (9)
Clerical	3.0 (0.000)	0.1 (1)	—	—	1.5 (2.121)	0.9 (2)	2.0 (1.732)	0.2 (3)
Professional	4.3 (4.680)	0.8 (7)	3.5 (2.646)	1.3 (4)	2.8 (2.195)	7.9 (17)	3.2 (2.989)	2.1 (28)
Pearson's r¶	-.002		.004		-.077		-.016	

Source: BFS data analyses.
Note: SD refers to standard deviation and N to number of cases.
¶Correlation between occupation and fertility.

women in sales. This is also the result of a single case with five children in the category. For urban elites, skilled–unskilled labourer women have the highest (5.6), and women with clerical jobs the lowest average (1.5).

In no group is any significant correlation of labour force participation with fertility noticed. Rural non–elites and sub–elites show an overall positive relationship. The relationship for total rural women is affected by these two groups, as they contain the majority of the women. While urban non–elites and elites show negative correlations, sub–elites demonstrate a positive direction in their correlationship with fertility. The association for total women in urban areas is not significant.

3. Female Age at First Marriage

Female age at first marriage is a very important factor in fertility analysis. It has an inverse relationship with fertility. Table 6.3 displays that both in rural and urban areas, on average, women have fewer children as the age at first marriage increases. However, when the age at first marriage is 30 years or more, the average number of children ever born is unusually high in both rural and urban areas. Six rural women have an average of 9.2 children ever born to them, and one urban woman has 10.0 children in this age at marriage category. In both cases, the problem is associated with the non–elites. The high average for this category may be due to either multiple births to the women, or problems related to data collection (i.e., either the interviewers or the respondents may have mixed up age at first marriage with last marriage; or the imputation of age at marriage into calender months and years may have created this problem), or both.

Other than the 30 years or more age at marriage category, rural non–elites show a slight increase in fertility in the 20–21 years age category. Rural sub–elites show an increase in the average in 22–24 years age group. However, rural elites exhibit a definite inverse pattern of association. Urban non–elites display a curvilinear pattern of age at first marriage with fertility. Urban sub–elites have a gradual decline in fertility from an average of 4.5 in below 15 years to 1.7 in 20–21 years. Then the average rises to 2.3 in

TABLE 6.3

AVERAGE NUMBER OF CHILDREN EVER BORN TO EVER-MARRIED BANGLADESHI WOMEN BY SOCIAL GROUP, FEMALE AGE AT FIRST MARRIAGE AND CURRENT PLACE OF RESIDENCE, BANGLADESH 1975-76

Age at First Marriage	Non-Elites Mean (SD)	Non-Elites Percent (N)	Sub-Elites Mean (SD)	Sub-Elites Percent (N)	Elites Mean (SD)	Elites Percent (N)	Total Mean (SD)	Total Percent (N)
				Rural				
<15 Years	4.2 (3.113)	86.1 (3460)	4.0 (2.951)	74.8 (474)	3.6 (2.850)	68.3 (71)	4.2 (3.091)	84.2 (4005)
15-17 Years	3.0 (2.895)	12.0 (484)	3.0 (3.124)	21.4 (134)	4.3 (2.801)	21.1 (22)	3.0 (2.947)	13.5 (640)
18-19 Years	2.4 (2.777)	1.1 (46)	2.6 (2.575)	2.0 (12)	(2.074)	4.8 (5)	2.5 (2.675)	1.3 (63)
20-21 Years	2.6 (2.705)	0.4 (16)	1.3 (1.380)	1.2 (7)	1.0 (1.414)	3.8 (4)	2.0 (2.328)	0.6 (27)
22-24 Years	2.5 (2.976)	0.2 (8)	2.8 (2.775)	0.7 (5)	0.5 (0.707)	1.9 (2)	2.3 (2.690)	0.3 (15)
25-29 Years	—	—	—	—	—	—	—	—
30+ Years	9.2 (1.722)	0.1 (6)	—	—	—	—	9.2 (1.722)	0.1 (6)
Pearson's r¶	-.115***		-.195***		-.143		-.129***	

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TABLE 6.3 Cont'd

Age at First Marriage	Non-Elites Mean (SD)	Non-Elites Percent (N)	Sub-Elites Mean (SD)	Sub-Elites Percent (N)	Elites Mean (SD)	Elites Percent (N)	Total Mean (SD)	Total Percent (N)
				Urban				
< 15 Years	4.1 (2.990)	80.1 (659)	4.5 (3.405)	67.7 (205)	5.3 (3.306)	38.4 (83)	4.3 (3.132)	70.6 (947)
15–17 Years	3.1 (2.659)	15.0 (123)	3.4 (2.674)	26.4 (80)	3.5 (2.691)	38.9 (84)	3.3 (2.669)	21.4 (287)
18–19 Years	3.1 (3.238)	2.1 (17)	3.2 (3.327)	2.6 (8)	2.3 (1.899)	9.3 (20)	2.8 (2.702)	3.4 (45)
20–21 Years	3.2 (3.938)	1.1 (10)	1.7 (1.366)	2.0 (6)	2.3 (2.822)	7.4 (16)	2.5 (2.994)	2.4 (32)
22–24 Years	1.1 (1.449)	1.2 (10)	2.3 (0.577)	1.0 (3)	1.2 (1.282)	3.7 (8)	1.3 (1.317)	1.6 (21)
25–29 Years	5.7 (2.517)	0.4 (3)	0.0 (0.000)	0.3 (1)	0.6 (0.894)	2.3 (5)	2.2 (2.949)	0.7 (9)
30+ Years	10.0 (0.000)	0.1 (1)	—	—	—	—	10.0 (0.000)	0.1 (1)
Pearson's r¶	−.102***		−.175***		−.448***		−.167***	

Source: BFS data analyses.
Note: SD refers to standard deviation and N to number of cases.
¶Correlation between age at first marriage and fertility.

22–24 years and falls to 0.0 in 25–29 years age group. Urban elites show a definite and steady pattern of negative association between age at first marriage and fertility.

The fluctuations in the observed relationship between age at first marriage and fertility suggest that there is no guarantee that an increase in age at first marriage will help reduce fertility in the sense that people have a tendency to "catch up" later. Even if it does help reduce fertility, it may have very little impact on the overall situation, because the proportion of women in the higher age at first marriage categories is so small that they can be regarded as outliers. Most of the women in Bangladesh are married before they pass their teens. In fact, the distribution shows that 99.0 per cent of rural and 95.4 per cent of urban women get married by the age of 19 years. As far as the groups are concerned, the differences are very small. The percentages for the rural non–elite, sub–elite and elite women who got married by the age of 19 years, are 99.2, 98.2 and 94.2, respectively. The percentages for their urban counterparts are 97.2, 96.7 and 86.6, respectively. Among all six groups, only urban elites show a relatively smaller proportion, which indicates a practice of relatively late marriage. However, 86.6 per cent too is quite high to have a substantial effect on the fertility level, reflected in the average number of children ever born to this group (the average of 3.9 is no different than that of the urban or the rural non–elites).

Thus, the correlation coefficients (cf., female education versus fertility) are very low, because the rural relationship is weaker than the urban one. Urban elites show the largest coefficient ($r=-.448$, $p<.001$).

4. Duration of Marriage

Duration of marriage — a combination of current age and age at first marriage — is another important variable in fertility analysis. If women spend a shorter period of time in the married state, the average number of children ever born is likely to be low. That is, duration of marriage is expected to be positively related to completed fertility. Table 6.4 presents the average number of children ever born to ever–married women in

TABLE 6.4

AVERAGE NUMBER OF CHILDREN EVER BORN TO EVER-MARRIED BANGLADESHI WOMEN BY SOCIAL GROUP, DURATION OF MARRIAGE AND CURRENT PLACE OF RESIDENCE, BANGLADESH 1975-76

Duration of Marriage	Non-Elites		Sub-Elites		Elites		Total	
	Mean (SD)	Percent (N)	Mean (SD)	Percent (N)	Mean (SD)	Percent (N)	Mean (SD)	Percent (N)
				Rural				
5 Years or Less	0.5 (0.839)	18.8 (754)	0.6 (0.685)	22.8 (144)	0.8 (0.884)	23.1 (24)	0.5 (0.818)	19.4 (922)
5-10 Years	1.9 (1.299)	17.4 (701)	2.1 (1.107)	18.8 (119)	2.9 (1.479)	25.0 (26)	2.0 (1.290)	17.8 (846)
10-15 Years	3.7 (1.627)	18.3 (736)	3.9 (1.317)	19.9 (126)	3.6 (1.805)	22.1 (23)	3.7 (1.591)	18.6 (885)
15-20 Years	5.2 (1.904)	14.0 (562)	4.8 (2.314)	13.1 (83)	5.5 (1.779)	9.6 (10)	5.2 (1.961)	13.8 (655)
20-25 Years	6.4 (2.377)	13.0 (521)	6.5 (2.332)	8.7 (55)	6.7 (3.279)	11.5 (12)	6.4 (2.389)	12.4 (588)
25-30 Years	7.5 (2.612)	8.3 (332)	7.7 (2.369)	8.1 (51)	6.3 (2.160)	5.8 (6)	7.5 (2.575)	8.2 (389)
30-35 Years	7.5 (2.929)	7.5 (301)	7.5 (3.284)	5.5 (35)	8.7 (3.215)	2.9 (3)	7.5 (2.962)	7.1 (339)
35+ Years	7.0 (2.888)	2.8 (113)	7.5 (2.245)	3.0 (19)	—	—	7.1 (2.802)	2.8 (132)
Pearson's r¶	.778***		.800***		.763***		.781***	

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TABLE 6.4 Cont'd

Duration of Marriage	Non-Elites Mean (SD)	Non-Elites Percent (N)	Sub-Elites Mean (SD)	Sub-Elites Percent (N)	Elites Mean (SD)	Elites Percent (N)	Total Mean (SD)	Total Percent (N)
				Urban				
5 Years or Less	0.7 (0.973)	19.6 (161)	0.7 (0.792)	23.1 (70)	0.9 (0.806)	27.3 (59)	0.8 (0.901)	21.6 (290)
5–10 Years	2.3 (1.515)	20.7 (170)	2.2 (1.336)	19.8 (60)	2.6 (1.195)	20.8 (45)	2.3 (1.429)	20.5 (275)
10–15 Years	3.7 (1.742)	19.2 (158)	4.6 (1.671)	13.5 (41)	3.8 (1.665)	16.7 (36)	3.9 (1.746)	17.5 (235)
15–20 Years	5.4 (2.090)	15.6 (129)	5.9 (2.251)	17.8 (54)	5.4 (2.486)	12.5 (27)	5.5 (2.185)	15.6 (210)
20–25 Years	6.2 (2.238)	9.1 (75)	6.2 (3.549)	9.6 (29)	6.8 (2.215)	9.3 (20)	6.3 (2.587)	9.2 (124)
25–30 Years	7.1 (3.083)	8.5 (70)	7.8 (2.420)	8.2 (25)	7.8 (2.880)	7.4 (16)	7.4 (2.911)	8.3 (111)
30–35 Years	7.1 (3.232)	5.1 (42)	8.3 (3.220)	5.6 (17)	8.6 (2.778)	5.5 (12)	7.7 (3.184)	5.3 (71)
35+ Years	7.4 (3.146)	2.2 (18)	5.0 (1.915)	2.3 (7)	13.0 (0.000)	0.5 (1)	7.0 (3.206)	2.0 (26)
Pearson's r¶	.742***		.744***		.835***		.756***	

Source: BFS data analyses.
Note: SD refers to standard deviation and N to number of cases.
Upper limit is included in the interval.
¶Correlation between duration of marriage and fertility.

Bangladesh by their duration of marriage. In general, both rural and urban women show a positive association between duration of marriage and fertility.

Rural non-elites and sub-elites demonstrate patterns similar to the overall rural-urban patterns, except that for rural sub-elites the deviation (a fall in the average) starts at 30-35 years age group. The lower average number of children ever born in 30-35, and 35 years or more of marriage may be the result of a higher age at first marriage. These may also be the effects of contraceptive use, as the general trend in the practice of contraception in Bangladesh is that rural women start using contraception at very late stages of their reproductive ages. There are no sample for the rural elites for the last age group, and have a positive relationship. Urban non-elites and elites also show positive relationships. Urban sub-elites show a pattern similar to that of the rural non-elites, sub-elites, and the overall rural and urban areas.

The correlation between duration of marriage and fertility is found to be very strong for all groups. The association is slightly stronger in rural than urban areas, as expected, because rural women marry at a relatively earlier age. However, urban elites show the strongest association ($r=.835$, $p<.001$).

5. Female Childhood Place of Residence

The assumption is that if a woman has an urban background in childhood, after her marriage she should have a lower level of fertility than if she has rural childhood background. Table 6.5 provides information in that regard. The expectation holds true for the overall rural-urban levels, especially in urban level.

For rural non-elites, no difference is found between women with rural and urban background. Only 1.1 per cent of the women in this group have an urban background. As expected, rural sub-elite women with urban backgrounds have a lower average number of children ever born (3.3) than the women with rural childhood background (3.8). Surprisingly, rural elites show the opposite pattern. Women with urban background have an average of 5.0, despite their relatively higher proportion (9.6 per cent) in the group, and women with rural background have an average number of 3.5 children ever born.

TABLE 6.5

AVERAGE NUMBER OF CHILDREN EVER BORN TO EVER-MARRIED BANGLADESHI WOMEN BY SOCIAL GROUP, CHILDHOOD PLACE OF RESIDENCE AND CURRENT PLACE OF RESIDENCE, BANGLADESH 1975-76

Childhood Place of Residence	Non-Elites		Sub-Elites		Elites		Total	
	Mean (SD)	Percent (N)	Mean (SD)	Percent (N)	Mean (SD)	Percent (N)	Mean (SD)	Percent (N)
				Rural				
Rural	4.0 (3.120)	98.9 (3977)	3.8 (3.010)	96.5 (610)	3.5 (2.789)	90.4 (94)	4.0 (3.101)	98.4 (4681)
Urban	4.0 (2.915)	1.1 (43)	3.3 (2.963)	3.5 (22)	5.0 (2.789)	9.6 (10)	3.9 (2.924)	1.6 (75)
Pearson's r¶	-.001		-.031		.161		-.003	
				Urban				
Rural	3.9 (2.980)	74.7 (615)	4.3 (3.321)	63.7 (193)	4.6 (2.985)	46.3 (100)	4.1 (3.063)	67.7 (905)
Urban	3.7 (3.001)	25.3 (208)	3.7 (3.061)	36.3 (110)	3.2 (3.087)	53.7 (116)	3.6 (3.040)	32.3 (434)
Pearson's r¶	-.025		-.096*		-.221***		-.075**	

Source: BFS data analyses.
Note: SD refers to standard deviation and N to number of cases.
¶Correlation between childhood place of residence and fertility.

Women of all urban groups show lower fertility when they have urban childhood background.

The correlations for the rural groups are not significant. Only urban sub-elite and elite women have a significant negative association between fertility and their childhood urban place of residence. Whether urban upbringing or other factors are responsible for this is difficult to determine here. However, it can be said that because of the overall low level of urbanization, other socio-economic characteristics (e.g., higher education, occupation) may have caused this significant negative correlation.

6. Child Mortality

Table 6.6 presents the number of children ever born to women by number of children dead for groups in rural and urban areas. For both rural and urban areas, the overall pattern is one of a positive association between child mortality and fertility. As the number of children dead increases, the fertility level increases consistently. The same pattern is found across all groups.

All groups show a significant positive association. The overall extent in the strength of the relationship is higher in rural than in urban areas. It is also evident from the data that the average number of children ever born is highest for the elites in every category except for the 1-2, and lowest for the non-elites in both rural and urban areas. This suggests that people in the upper stratum of the society and in the urban areas probably respond more to higher child mortality with increased fertility.

7. Muslim Religiosity

Table 6.7 shows no difference in fertility levels between Muslim and non-Muslim women in rural areas. Like the overall pattern, rural non-elites do not show any difference between the average number of children ever born to Muslim and non-Muslim women. Rural Muslim sub-elite and elite women show higher level of fertility than the women with other religions. Unexpectedly, non-Muslim women show a slightly higher average (4.0) number of children ever born than the Muslims (3.9) in the urban areas.

TABLE 6.6

AVERAGE NUMBER OF CHILDREN EVER BORN TO EVER-MARRIED BANGLADESHI WOMEN BY SOCIAL GROUP, NUMBER OF CHILDREN DEAD AND CURRENT PLACE OF RESIDENCE, BANGLADESH 1975-76

	Non-Elites		Sub-Elites		Elites		Total	
Number of Children Dead	Mean (SD)	Percent (N)	Mean (SD)	Percent (N)	Mean (SD)	Percent (N)	Mean (SD)	Percent (N)
				Rural				
None	2.1 (2.193)	47.4 (1904)	2.3 (2.160)	58.4 (369)	2.8 (2.474)	68.3 (71)	2.1 (2.201)	49.3 (2344)
1–2	5.1 (2.391)	39.6 (1593)	5.0 (2.547)	32.0 (202)	4.9 (2.203)	27.9 (29)	5.1 (2.405)	38.4 (1824)
3–4	7.5 (2.066)	10.0 (401)	7.8 (2.057)	7.9 (50)	9.0 (3.366)	3.8 (4)	7.6 (2.078)	9.6 (455)
5 or More	10.0 (2.240)	3.0 (122)	10.5 (2.018)	1.7 (11)	—	—	10.0 (2.220)	2.8 (133)
Pearson's r¶	.686***		.669***		.536***		.681***	
				Urban				
None	2.2 (2.087)	49.9 (411)	2.7 (2.469)	60.7 (184)	2.8 (2.419)	75.0 (162)	2.5 (2.269)	56.4 (757)
1–2	4.8 (2.539)	38.8 (319)	5.7 (2.939)	31.7 (96)	6.7 (2.786)	21.3 (46)	5.2 (2.724)	34.4 (461)
3–4	7.5 (2.363)	9.2 (76)	8.5 (2.272)	6.9 (21)	7.9 (2.673)	3.2 (7)	7.7 (2.377)	7.7 (104)
5 or More	10.1 (2.395)	2.1 (17)	11.0 (2.828)	0.7 (2)	13.0 (0.000)	0.5 (1)	10.3 (2.390)	1.5 (20)
Pearson's r¶	.650***		.618***		.569***		.614***	

Source: BFS data analyses.
Note: SD refers to standard deviation and N to number of cases.
¶Correlation between number of children dead and fertility.

TABLE 6.7

AVERAGE NUMBER OF CHILDREN EVER BORN TO EVER-MARRIED BANGLADESHI WOMEN BY SOCIAL GROUP, RELIGION AND CURRENT PLACE OF RESIDENCE, BANGLADESH 1975-76

	Non-Elites		Sub-Elites		Elites		Total	
Religion	Mean (SD)	Percent (N)	Mean (SD)	Percent (N)	Mean (SD)	Percent (N)	Mean (SD)	Percent (N)
				Rural				
Muslim	4.0 (3.119)	84.1 (3379)	3.8 (3.775)	76.6 (484)	3.7 (2.866)	79.8 (83)	4.0 (3.109)	83.0 (3946)
Others	4.0 (3.113)	15.9 (641)	3.7 (2.787)	23.4 (148)	3.3 (2.629)	20.2 (21)	4.0 (3.046)	17.0 (810)
Pearson's r¶	.001		.008		.059		.006	
				Urban				
Muslim	3.9 (3.019)	85.9 (707)	3.9 (3.300)	81.2 (246)	3.9 (3.158)	83.3 (180)	3.9 (3.097)	84.4 (1133)
Others	3.6 (2.761)	14.1 (116)	5.0 (2.906)	18.8 (57)	3.7 (2.896)	16.7 (36)	4.0 (2.881)	15.6 (209)
Pearson's r¶	.041		-.135**		.024		-.009	

Source: BFS data analyses.
Note: SD refers to standard deviation and N to number of cases.
¶Correlation between religion and fertility.

Urban non-elite and elite Muslim women show higher fertility, but for urban sub-elites, non-Muslims show higher fertility than that of the Muslims. The difference is considerable (on average, 1.1 children per woman), and may have influenced the overall urban level.

The correlationship is very weak for all groups. For rural groups, the coefficients, though not significant, show an upward progression with the group position, implying a relatively greater influence of Muslim religiosity among women from the upper stratum. This is, though unexpected, not surprising in rural Bangladesh. What is surprising is the relationship for the urban sub-elites that produces a statistically significant negative coefficient ($r=-.135$, $p<.01$). Although surprising and contrary to popular belief, this is possible with the existence of unusually extreme cases of Muslim women with very low average numbers of children ever born. The whole situation in the relationship (i.e., not significant and positive, and significant and negative) probably suggests the failure of simple religious affiliation as a proxy for Muslim religiosity to capture the mechanism. It may be that the role of religious denomination as a predictor of fertility may have been over-emphasized until now. The positive relationship between religious affiliation and fertility is probably an indirect or spurious outcome through the diffused effect of long-standing traditional agrarian culture with religious beliefs, superstitions, and practices.

In summary, the findings indicate that child mortality and duration of marriage are strongly and directly related to the total number of children ever born to women in all strata of the society. Female education and age at first marriage are negatively correlated with fertility, but the associations are not very strong. The relationships of female labour force participation, religion, and women's childhood urban background with fertility show a very weak and non-significant association. However, from the bivariate analyses, it is not possible to determine the net effect of these determinants on fertility. Therefore, a multivariate regression analysis is performed in the next chapter.

Chapter VII

MULTIVARIATE ANALYSES OF DIFFERENTIAL FERTILITY

A. The Regression Model

A multivariate version of the model of the determinants of fertility used in the bivariate analyses is applied to the Ordinary Least Square multiple regression analysis. The hypotheses remain the same. A slight modification occurs in the model in the sense that age at first marriage and childhood place of residence are excluded from, and son preference (proportion of sons ever born) is included in the multivariate analyses. Two reasons can be stated for the exclusion of age at first marriage. The first reason goes with the broad conclusion drawn by the BFS researchers concerning age at marriage. It "is not an important demographic variable for interpretation of fertility at the national level, though it may assume greater importance for some sub-population" (Population Control and Family Planning Division, 1978:66). The overall age at marriage is very low in the country, and 93 per cent of the marriages occur before the age of 18. Second, we decided to include duration of marriage since it has the advantage over age at first marriage in taking into account both one's age at marriage and current age. Since the childhood place of residence variable does not distinguish when the movement occurred (before or after marriage), and the overall urban fertility level is high, it is not expected to have a great impact on the level of fertility.

We know from different studies (e.g., Cain, 1977; Caldwell, 1978; McNicoll, 1980) that people in Bangladesh place a higher value on sons than daughters for social, economic and cultural reasons. The general expectation is that if the number of sons is greater than the number of daughters born in a family, the family would not seek more children. The research hypothesis would be: the higher the proportion of sons ever born, the lower the number of children ever born to a woman.

In the final analysis, six independent variables are entered into the equations: women's education, labour force participation, duration of marriage, child mortality (number of children dead), son preference (proportion of sons ever born), and Muslim

religiosity (percentage of Muslim women). The dependent variable is the number of children ever born to ever-married Bangladeshi women, which is expected to be affected positively by duration of marriage, child mortality and Muslim religiosity, and negatively by female education, labour force participation and proportion of sons ever born. Figure 2 presents the schematic portrayal of the model. Although the schematic presentation demonstrates a causal structure, path analysis is not attempted. The model predicts fertility as a linear function of the determinants, which is expressed as follows:

$$CEB = Constant + b1*DM + b2*CM + b3*MR - b4*FE - b5*PSEB - b6*FLFP + e \quad (3)$$

where, CEB = Children Ever Born

DM = Duration of Marriage

CM = Child Mortality

MR = Muslim Religiosity

FE = Female Education

PSEB = Proportion of Sons Ever Born

FLFP = Female Labour Force Participation

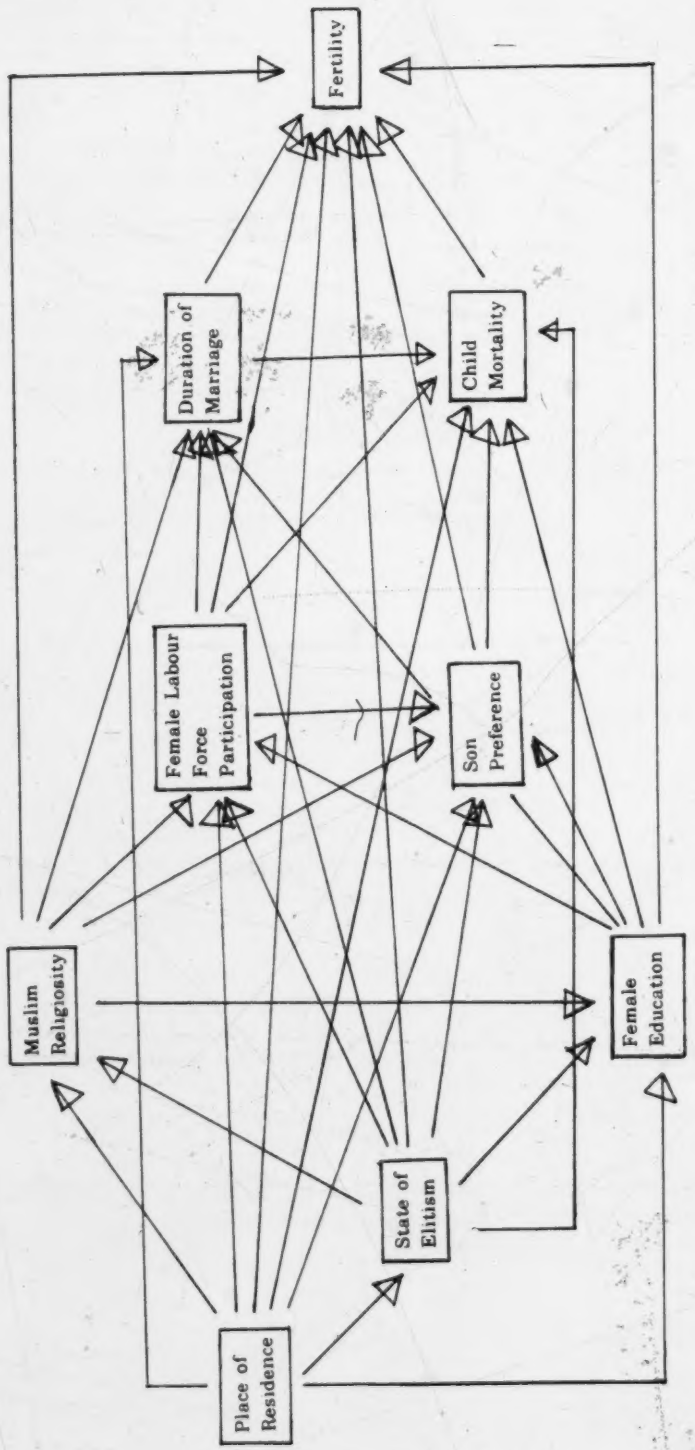
e = Error Term

b1 through b6 = Regression Coefficients

A brief review of the operational measures of the determinants used in the regression model is necessary. Education is a continuous variable measured in single years of schooling. Duration of marriage is another continuous variable measured as the number of months spent in marriage. Child mortality is a continuous variable measured as the "number of children dead" obtained by subtracting the number of children alive from total number of children ever born. Proportion of sons ever born to ever-married women is also a continuous variable created by dividing the number of sons ever born by the number of children ever born. As a complementary measure, proportion of daughters ever born is created by replacing the number of sons ever born in the numerator. Muslim religiosity, indicated by the religious denomination, is dichotomous, containing two

FIGURE 2

A MODEL OF DETERMINANTS OF FERTILITY IN BANGLADESH



categories — "Muslims" and "non-Muslims". Female labour force participation was originally a nominal variable. It was transformed into a dichotomy: "working" and "not working".

The variables are entered into the equation following the stepwise method for the estimation of variance explained in the dependent variable by each predictor. The same model is applied to all three groups separately in the rural and the urban context.

As noticed in the bivariate analyses, some categories of the predictor variables contained a single case or few cases with unusually high or low number of children ever born to women. The existence of such extreme cases seems to have created erratic patterns in the bivariate relationships. In order to derive more precise parameters and to improve the explanatory power of the models, the extreme cases are dropped from the analyses. That is, women with an average number of children ever born above or below three standard deviation of the mean are eliminated from the regressions.

B. Findings

1. Rural Non-Elites

Table 7.1 presents the multiple regression coefficients (both unstandardized and standardized) and R-square changes (proportion of variance explained in the dependent variable) by each of the predictors in the model for rural non-elites. The findings show that all determinants have statistically significant effects on fertility. Duration of marriage, child mortality and proportion of sons ever born are statistically significant at the .001 level of probability, and female education, labour force participation and Muslim religiosity at the .05 level of significance. The total variance explained by the model for rural non-elites is 78.7 per cent, of which, 67.5 per cent is explained by duration of marriage. Child mortality explains 10.5 per cent, and proportion of sons ever born less than one per cent. After these three determinants, Muslim religiosity is the most important variable (fourth in relative importance) to effect fertility, followed by female

TABLE 7.1

REGRESSION ANALYSIS OF CHILDREN EVER BORN FOR RURAL NON-ELITES, BANGLADESH 1975–76 (N = 3922)

Determinants	b	B	R-Square Change
Duration of Marriage	.01585*** (.00023)	.60945 (.00891)	.67496
Child Mortality	.82146*** (.01890)	.37602 (.00865)	.10526
Proportion of Sons Ever Born	.70964*** (.07182)	.07598 (.00769)	.00532
Muslim Religiosity	.19003** (.06173)	.02275 (.00739)	.00053
Female Education	.03843* (.01752)	.01642 (.00749)	.00030
Female Labour Force Participation	-.13388* (.06531)	-.01522 (.00742)	.00023
Intercept (a)	-.14999* (.07213)		

Multiple R = .88689
R-Square = .78657
Adjusted R-Square = .78624
Standard Error = 1.41543

Source: BFS data analyses.
Note: The figures in parentheses refer to standard errors.
*** P <.001; ** P <.01; * P <.05

education and female labour force participation. The proportion of variance explained by Muslim religiosity, female education and labour force participation is negligible.

The findings are consistent with reality in Bangladesh. As marriage is almost universal and the rate of divorce and separation low in Bangladesh, duration of marriage is most likely to have a predominant positive effect on fertility. High child mortality is prevalent in this group because of both lack of knowledge and access to health care and sanitation. The high rate of child mortality induces people to have additional children as insurance, because they are not sure whether an adequate number of children are going to survive after five years of age. High child mortality in Bangladesh creates a situation where people tend to have more children than they actually might have desired. Studies in other less developed countries (e.g., in Guatemala by Pebley et al., 1979; in Egypt by Rizk et al., 1980) also support this. Heer (1983:370-71) points out that the effect of mortality may also depend on the gender composition of the children. According to him, the effect of the death of a male child should be stronger than that of a female child.

Preference for sons is found to be common not only in Bangladesh, but also in many third world (Williamson, 1976) and other countries. It is believed that if a couple has an optimum number of sons born especially at lower parities, the number of children ever born to that couple will be lower than if they have a higher proportion of daughters. Accordingly, the indicator (proportion of sons ever born) used for son preference variable is expected to affect fertility negatively. Unexpectedly, the findings of this study show a positive effect of the predictor on fertility. The positive effect implies that a higher number of sons directly influences the number of children ever born to women. From this, it can be suggested that gender has no influence on the decision to have more children in a general situation, where a family has more or less equal distribution of boys and girls. This suggestion is tested by replacing the proportions of sons ever born with proportion of daughters ever born in the model. The result confirms the suggestion with a statistically significant positive effect on fertility (at .001 level).[16] That means, both

[16] The regression results with proportion of daughters ever born for all groups are presented in Tables A.7.2 through A.7.7 in the Appendix.

genders are equally important to the people of this group. In other words, the number of children that matters most, not the gender.

Preference for sons may have a strong influence on fertility only when no son is born to a family, or the proportion of daughters is unusually high. An analysis of the BFS data by the United Nations' Population Division (1981) supports this. The findings show that among the currently married fecund non-pregnant women with two living children who wanted another child, 95 per cent of the women with no son, 67 per cent with one son, and 15 per cent with two sons preferred the next child to be a boy. In Bangladesh, the preference based on their desire has little influence, because the choice of gender comes to play a role in determining the number of children only when a rational decision making process is involved among the couples. In Bangladesh, such a process, especially in the lower stratum of the society, does not seem to exist.

The positive effect of Muslim religiosity on fertility is as expected, as it is established that Muslims throughout the world exhibit pro-natal attitudes. However, it should be pointed out that the religious denomination as such does not influence fertility to the point where Muslims will always have higher fertility than the non-Muslims. It is seen in Table 6.7 that Muslims and non-Muslims have the same average number of children ever born to the ever-married women in this group. The underlying essence is that it is religiosity (i.e., beliefs and practices of religious norms and values nurtured within a person), not the religious affiliation of the people, that affects fertility. Religiosity, magnified by the agrarian cultural institutions, is the main kernel of religion that affects fertility positively in Bangladesh. Maloney et al. (1981) observe the positive effect of Muslim religiosity on fertility. They note that the attitude toward high fertility arises from the long-standing religio-agrarian culture of the society, where religious beliefs are integrated to agrarian cultural values since antiquity.

Despite its congruity with the research hypothesis, the significant negative effect of female labour force participation is surprising in this group. The bivariate analysis shows a positive relationship between female labour force participation and fertility. The statistical contradiction at the two levels of analyses may be accounted for by the fact

that in a bivariate situation, the influence of other variables is not controlled, and consequently, the effect of the factor may be misleading. In the multivariate analysis, control of other factors reveals the actual relationship between the independent and the dependent variable. But the theoretical contradiction makes the matter somewhat complex to explain. Data from Table 6.2 show that only 14 per cent of the women work in this group, and of the women who work, 93.6 per cent (13.1 per cent of the total women) are involved in occupations (household, agricultural and skilled-unskilled labourer) that are believed to have no depressing effect on fertility. Women with these occupations also have very low levels of education. These kinds of occupations cannot be expected to affect fertility negatively with statistical significance. Interestingly enough, the occupations that are supposed to have a negative association with fertility do not show conformity, as we see that women with professional occupations have the highest average number of children ever born in this group.

If the mechanism involved in the low status occupations is examined, especially household and skilled-unskilled labourers, an insight into the issue can be obtained. The data from Table 6.2 reveal that 45.2 per cent of the working women have household occupations which include women working as maids and housekeepers. To do these kinds of work, most often one has to stay away from home. An additional 37 per cent work as skilled-unskilled labourers. This type of work also requires staying out of home for a while. Together, these two occupational categories contain 82.2 per cent of the working women, who possibly were separated frequently from their spouses, and hence, had fewer than expected number of children ever born to them. This suggests that it is not the changes in attitudes and values regarding childbearing, but the forced abstention created by the temporary separation of spouses (cf., Davis-Blake's Intermediate Variable) that affects fertility negatively.

Therefore, it can be concluded that fertility is affected negatively and deliberately by being employed in higher occupations (related to higher education and training) through their influence in changing attitudes toward traditional ways of life, and hence, reproductive behaviour. It is also expected to be affected negatively in less prestigious

occupations through reduction in coital frequency resulting from separating spouses. While the first half of the statement may apply to the women of the upper stratum, the latter part is a plausible explanation for the women in the lower group.

It may be argued that these women could join the labour force, because they have fewer children. The data tend to disagree with this argument. From Table 6.2, it can be seen that the average number of children ever born to women in these categories is no lower than for women in other occupational categories. Since ours is a cumulative measure of fertility, it cannot resolve the issue of whether a lower fertility level enables women to join the labour force, or vice-versa. The resolution of the argument could be achieved if data on parity-based occupational status of women were available. However, the answer to the question of whether women of this group have a choice in joining the labour force can shed light on the issue. In our opinion, they do not have a choice. They are forced to join the labour force because of economic adversity in the family, even if they have several children. A large number of children does not seem to hinder their work; rather, older children provide child care during mothers' work absence.

The positive, instead of negative, direction in the effect of female education on fertility may appear to be contrary to expectation, but the level of education of women in this group tells the story. Most of the women in this group (96.5 per cent, see Table 6.1) have either no education, or an education of four or less years of schooling. Schooling of four or less years cannot be expected to reduce fertility. Moreover, religious education is not separated from formal education in the BFS data set. In rural Bangladesh, religious education is considered to be mandatory, particularly in childhood. Education through religious institutions (e.g., *Madrasa* and *Maktab*) does not deter high fertility; rather it reinforces it. The influence of religious education is so dominant that the positive effect becomes significant in this group.

2. Rural Sub-Elites

The regression findings for the rural sub-elites are presented in Table 7.2. Duration of marriage, child mortality, proportion of sons ever born and Muslim religiosity have statistically significant effects on fertility. The total variance explained by the model in this group is 79.1 per cent. Duration of marriage alone explains 70.7 per cent of the variance in fertility, and child mortality 7.5 per cent. Proportion of sons ever born, Muslim religiosity, female education, and labour force participation together fail to explain even one per cent variance. For this group, female labour force participation precedes female education in terms of relative importance.

However, despite their almost equal relative position, some determinants gain and others lose ground in the extent of their explanatory powers. The unstandardized regression coefficients for this group show that the extent of unit effect increases from that of the non-elites slightly in duration of marriage, and substantially in proportion of sons ever born, Muslim religiosity and female labour force participation. It decreases substantially in case of child mortality and slightly in female education.

Female education — the last factor to influence fertility in this group — fails to achieve statistical significance, but a positive direction in the effect is still there. The existence of the positive direction in the effect of female education can be accounted for by the same explanation as stated for rural non-elites. The failure of female education to have a statistically significant effect on fertility may be contrary to expectation, but not surprising, as the level of education for the women in this social group is not very high. Table 6.1 shows that 98.9 per cent of the women have nine or less years of schooling. More specifically, 43.2 per cent of the women do not have any education at all, and 46.1 per cent have five or less years of schooling. Fertility is hardly affected by this level of female education. Maloney et al. (1981) and Chaudhury (1983), among others, have reached the same conclusion.

In less developed countries like Bangladesh, where traditional constraints on fertility are strong, higher threshold levels of education are required to reduce fertility (Rodriguez and Cleland, 1981; and Alam and Casterline, 1984). In most Asian countries,

TABLE 7.2

REGRESSION ANALYSIS OF CHILDREN EVER BORN FOR RURAL SUB-ELITES, BANGLADESH 1975-76 (N=620)

Determinants	b	B	R-Square Change
Duration of Marriage	.01664*** (.00058)	.65354 (.02307)	.70716
Child Mortality	.73712*** (.04985)	.32097 (.02170)	.07463
Proportion of Sons Ever Born	.80154*** (.17787)	.08711 (.01933)	.00648
Muslim Religiosity	.34686** (.12958)	.04957 (.01852)	.00252
Female Education	.01178 (.02105)	.01074 (.01919)	.00011
Female Labour Force Participation	-.35220 (.31930)	-.02045 (.01854)	.00040
Intercept (a)	-.15397 (.16852)		

Multiple R= .88955
R-Square= .79130
Adjusted R-Square=.78925
Standard Error=1.36402

Source: BFS data analyses.
Note: The figures in parentheses refer to standard errors.
*** P <.001; ** P <.01; * P <.05

secondary education is found to be that threshold level (Singh and Casterline, 1985:206). In the rural sub–elite group, only 9.6 per cent of the women have six to nine years of schooling. Whether this group of women has a significant effect on total fertility cannot be determined easily, but it could verified indirectly through a dummy variable regression analysis. Analysing the BFS data, Chaudhury (1983) finds no significant effect of six to nine years of schooling on fertility for rural women. Only at national and urban levels does this group have a significant effect.

Female labour force participation is also unable to achieve statistical significance for this group. A substantial drop (16.7 percentage points) in participation rate is noticed for this group. Table 6.2 shows that 96.7 per cent of the rural sub–elite women do not work after marriage compared to 86 per cent of rural non–elite women. The 3.3 per cent of the women who work do not have enough variability in their levels of fertility to generate a significant effect. The drop in the participation rate implies that the women in this group do not have to, or are not allowed to work because of relatively better socio–economic status.

3. Rural Elites

Table 7.3 presents the findings from the regression analysis for rural elites. It demonstrates that only duration of marriage and child mortality are statistically significant in affecting fertility in the expected direction. The model explains 66.9 per cent of the total variance in fertility, almost all of which is accounted for by the two significant determinants — 58.5 per cent by duration of marriage and 6.7 per cent by child mortality. In terms of relative importance, female education raises its position from the last in rural sub–elite and fifth in rural non–elite group to third. Proportion of sons ever born occupies fourth, Muslim religiosity fifth, and female labour force participation, the last. In terms of unit change, duration of marriage, child mortality and female education increase the extent of their effect on fertility. The extent of their effects declines with Muslim religiosity, proportion of sons ever born and female labour force participation.

TABLE 7.3

REGRESSION ANALYSIS OF CHILDREN EVER BORN FOR RURAL ELITES, BANGLADESH 1975-76
(N = 103)

Determinants	b	B	R-Square Change
Duration of Marriage	.01818*** (.00198)	.65793 (.07182)	.58523
Child Mortality	.91304*** (.22913)	.26379 (.06620)	.06754
Proportion of Sons Ever Born	.76615 (.49776)	.09658 (.06275)	.00747
Muslim Religiosity	.17682 (.40711)	.02580 (.05940)	.00072
Female Education	.10079 (.06518)	.10556 (.06833)	.00731
Female Labour Force Participation	-.32935 (.76197)	-.02794 (.06463)	.00064
Intercept (a)	-.50366 (.64589)		

Multiple R = .81787
R-Square = .66890
Adjusted R-Square = .64821
Standard Error = 1.64577

Source: BFS data analyses.
Note: The figures in parentheses refer to standard errors.
*** P <.001; ** P <.01; * P <.05

The failure of female labour force participation to achieve statistical significance is not surprising. Table 6.2 shows that 94.2 per cent of of women in this group do not work, in spite of being in the highest social stratum; this may be because of their better economic conditions. It may also be because of the dominant role played by social and cultural institutions, as more conformity to the traditional norms and values is expected of the people in the upper stratum of society, especially in the rural areas. The more people abide by the traditional social and cultural customs, the more respect they earn from the society. In accordance with the religious codes of conduct, women are viewed as persons to be secluded under *purdah* (veil), and to remain inside the home. In both traditional and religious senses, the more a woman keeps herself under *purdah*, the more virtuous and the better bride she is. Women are allowed to involve themselves in the labour force either to enhance or maintain their social status. Data from Table 6.2 support this, as all the women who work are found in the categories with higher occupational prestige (half of them in services and another half in professional occupations). None is involved in household, agricultural, skilled-unskilled labourers, sales and clerical occupations.

Female education still has a positive effect on fertility, indicating the presence of the influence of religious education on secular education. The non-significant effect of female education implies that the threshold level (when education starts to influence in opening up people's mind toward change) has not been yet reached at which it starts to have significant negative effect on fertility. It is seen from Table 6.1 that 90.4 per cent of the rural elite women have an education of nine or less years of schooling — 13.5 per cent have no education, 12.5 per cent are below primary, 32.7 per cent have primary and 31.7 per cent are below secondary levels of education. Only 9.6 per cent of rural elite women have ten or more years of schooling. In other words, a much higher education threshold level is required for the rural areas, even if the women belong to the highest stratum of the society. Chaudhury (1983) also does not find a significant effect of education on fertility for rural women with post secondary education.

Although the loss of significance for proportion of sons ever born and Muslim religiosity projects a bright prospect for fertility declines in Bangladesh, it does not mean that the dominance of traditional norms and values has evaporated and that people will stop aiming for more sons. A latent desire to have sons may still be there. However, it can be suggested that the relatively higher education of women in this group may have some influence in reducing the significance of Muslim religiosity and proportion of sons ever born.

4. Urban Non-Elites

Table 7.4 shows that fertility, in this group, is affected positively by duration of marriage, child mortality, proportion of sons ever born and Muslim religiosity, and negatively by female labour force participation. Female education fails to achieve statistical significance. The total variance explained in fertility by the model in this group was 74.3 per cent, the majority of which is explained by duration of marriage (62.9 per cent) and child mortality (10.1 per cent). In terms of relative importance, proportion of sons ever born is third, female labour force participation fourth, Muslim religiosity fifth and female education is the last determinant to affect fertility.

The explanation put forward for rural non-elites can also be attributed to the achievement of statistical significance by female labour force participation. According to the findings presented in Table 6.2, this group has the highest proportion of women who work (20.4 per cent). Of these women, 70.8 per cent (14.5 per cent of the total women) work in household occupations, and an additional 13.1 per cent (2.7 per cent of the total women) work as skilled-unskilled labourers. That is, a total of 83.9 per cent of the women who work, are in occupations that are apparently expected to have no effect on fertility behaviour. But as pointed out earlier, these occupations have an element of separating the spouses from each other, which tend to have a depressing effect on fertility through the reduction of coital frequency. Additionally, sub-fecundity is usually found to be higher among working women (Freedman et al., 1959). Women in service

TABLE 7.4

REGRESSION ANALYSIS OF CHILDREN EVER BORN FOR URBAN NON-ELITES, BANGLADESH 1975-76 (N=806)

Determinants	b	B	R-Square Change
Duration of Marriage	.01610*** (.00055)	.60907 (.02088)	.62929
Child Mortality	.83369*** (.04730)	.36328 (.02061)	.10112
Proportion of Sons Ever Born	.72455*** (.16067)	.08278 (.01836)	.00589
Muslim Religiosity	.36884* (.15199)	.04376 (.01803)	.00187
Female Education	.03153 (.03105)	.01859 (.01831)	.00033
Female Labour Force Participation	-.50955*** (.13200)	-.06700 (.01813)	.00455
Intercept (a)	-.15320 (.17738)		

Multiple R= .86201
R-Square= .74306
Adjusted R-Square=.74113
Standard Error=1.49536

Source: BFS data analyses.
Note: The figures in parentheses refer to standard errors.
*** P <.001; ** P <.01; * P <.05

category (5.9 per cent of the women, who work) may also have contributed to this negative effect. In general, the average number of children ever born to the women in this category is found to be the lowest (2.2).

5. Urban Sub-Elites

Table 7.5 presents the findings from the regression analysis for urban sub-elites. Duration of marriage and child mortality are significant at .001, female labour force participation at .01, and proportion of sons ever born at the .05 level. Muslim religiosity and female education fail to achieve statistical significance. The model explains 71.1 per cent of the total variance in fertility for this group. Most variance is explained by duration of marriage (58.9 per cent) and child mortality (10.9 per cent). The remaining determinants together explain only 1.3 per cent. The relative importance of the factors has also changed slightly in this group. Female labour force becomes third, proportion of sons ever born fourth, female education fifth and Muslim religiosity the last. Although not significant, education continues to show a positive direction in its effect on fertility.

The significant effect of female labour force participation is surprising. This group has the highest fertility level with a very low proportion of women (5.9 per cent) who work. Whether the mechanism that was assumed to be working for rural and urban non-elites, or the mechanism through which occupational prestige affects fertility negatively by changing attitudes towards childbearing is difficult to determine. From Table 6.2, it can be seen that 72.2 per cent of the women who worked (4.3 per cent of the total women) have the occupations of household and skilled-unskilled labourers with an average of 4.3 number of children ever born, and 22.2 per cent have professional occupations with an average of 3.5 children. It may be tentatively suggested that, despite their higher level of fertility, the women with household and skilled-unskilled labourer occupations influence the determinant in achieving significance due to a larger number of cases than in the professional occupations category.

TABLE 7.5

REGRESSION ANALYSIS OF CHILDREN EVER BORN FOR URBAN SUB-ELITES, BANGLADESH 1975–76 (N = 300)

Determinants	b	B	R-Square Change
Duration of Marriage	.01723*** (.00105)	.62041 (.03784)	.58923
Child Mortality	1.11133*** (.10679)	.36066 (.03466)	.10938
Proportion of Sons Ever Born	.72333* (.32375)	.07252 (.03246)	.00473
Muslim Religiosity	.05151 (.26512)	.00624 (.03212)	.00003
Female Education	.01750 (.03600)	.01659 (.03412)	.00023
Female Labour Force Participation	−1.29563** (.43297)	−.09503 (.03175)	.00766
Intercept (a)	.17194 (.37829)		

Multiple R = .84336
R-Square = .71126
Adjusted R-Square = .70535
Standard Error = 1.76058

Source: BFS data analyses.
Note: The figures in parentheses refer to standard errors.
*** P <.001; ** P <.01; * P <.05

6. Urban Elites

The regression findings for urban elites are presented in Table 7.6. Duration of marriage, child mortality and female education remain as the significant factors affecting fertility. For the first time, the direction of the education effect is in the expected direction (negative). It suggests that the relative role of religious education in relation to secular education probably has diminished in this group, as most of the women in this group had higher levels of education. Table 6.1 shows that 33.3 per cent of the women had six to nine years and 38 per cent had ten or more years of schooling. However, the amount of variance explained in fertility by education (about one per cent) indicates that the effect is very weak. The model explains 78.5 per cent of the total variance in fertility for this group. As usual, duration of marriage explains the most (72.6 per cent), followed by child mortality (4.9 per cent).

Female labour force participation fails to affect fertility even though a higher proportion of women (8.8 per cent), relative to urban sub–elites, have occupations that are believed to have a significant effect on fertility. The stronger contribution of education may have dominated over the effect of female labour force participation. The failure of Muslim religiosity in achieving significance implies that the influence of Muslim religiosity fades away with the increase of education in an urban environment.

Proportion of sons ever born loses significance and retains a positive direction. When the proportion of daughters ever born is entered into the equation, the determinant becomes significant (see Table A.7.7 in the Appendix). This suggests that when the number of daughters is higher than sons among the children ever born, urban elites continue to have more children, and when the number sons was higher than daughters, a desire to have more children is still there in latent form. This strengthens our contention that the overall tendency of the people of Bangladesh is to have a large family regardless of the gender of the children ever born.

TABLE 7.6

REGRESSION ANALYSIS OF CHILDREN EVER BORN FOR URBAN ELITES, BANGLADESH 1975-76
(N=211)

Determinants	b	B	R-Square Change
Duration of Marriage	.01809*** (.00109)	.68801 (.04144)	.72607
Child Mortality	.81668*** (.12720)	.23856 (.03716)	.04919
Proportion of Sons Ever Born	.25675 (.28110)	.03024 (.03311)	.00088
Muslim Religiosity	.01512 (.25667)	.00194 (.03289)	.00000
Female Education	-.08771* (.03771)	-.09155 (.03936)	.00815
Female Labour Force Participation	-.32046 (.31686)	-.03466 (.03427)	.00104
Intercept (a)	1.30666** (.45478)		

Multiple R= .88619
R-Square= .78533
Adjusted R-Square=.77902
Standard Error=1.38317

Source: BFS data analyses.
Note: The figures in parentheses refer to standard errors.
*** P <.001; ** P <.01; * P <.05

C. Discussion

The regression findings of this study demonstrate that regardless of place of residence and group position, duration of marriage and child mortality stand out as the most important determinants (first and second respectively) of fertility in Bangladesh. The third most important determinant is proportion of sons ever born, significantly affecting the fertility of non–elites and sub–elites (both in rural and urban areas). Muslim religiosity significantly affects fertility of rural and urban non–elites. Female labour force participation has a significant effect on the fertility of rural non–elites, and urban non–elites and sub–elites. Female education is significant only for two groups — rural non–elites and urban elites. The overall effect of education on fertility is not very great across the groups, except for urban elites.

The standardized regression coefficients show that duration of marriage has the strongest effect on fertility in all groups, followed by child mortality. The rest of the determinants change their position in terms of the extent of their effects. Proportion of sons ever born is third in relative importance for rural non–elites, sub–elites and urban non–elites, becomes fourth for rural elites and urban sub–elites, and fifth for urban elites. Muslim religiosity is fourth for rural non–elites and sub–elites, becomes fifth for rural elites and urban non–elites, and sixth for urban sub–elites and elites. Female labour force participation occupies third position for urban sub–elites, fourth for urban non–elites and elites, fifth for rural sub–elites and sixth for rural non–elites and elites. Despite the differences in significance level and direction in the effects, female education is the third most important factor in determining fertility for both rural and urban elites, fifth for rural non–elites and urban sub–elites, and sixth for rural sub–elites and urban non–elites.

The implications of the above are that (a) irrespective of group position, duration of marriage and child mortality significantly affect fertility; (b) with the enhancement of group position, the gender of the children becomes less important to the people; (c) Muslim religiosity is more dominant in rural than in urban areas, and in the lower than in the upper stratum; (d) female labour force participation has less importance in the rural areas even for the elites; and (e) female education has a negative effect on fertility

only when the highest level of socio-economic status is attained (i.e., elites) in the urban areas. One may be tempted to conclude from the findings that if Bangladeshi people attain the characteristics of urban elites, fertility inhibiting socio-economic characteristics will have their proper effects on fertility, and the dominance of socio-cultural factors will be diminished. Consequently, the level of fertility will be reduced. This suggestion is examined through standardization technique.

Using urban elites as the standard population, characteristics of the people of this group are employed into the equations generated by the regression models for other groups. The distribution of the observed and the expected average number of children for each group is presented in Table 7.7. The results demonstrate support for the suggestion for all groups, except for the rural elites. The most reduction is expected in the rural non-elite group (a reduction of 0.7 children, on average). While both rural and urban non-elites and sub-elites show an expected reduction of at least an average of half a child, rural elites demonstrate, on average, an increase of 0.2 children ever born to women. This increase occurs because of higher average fertility for urban elites in the actual observed situation.

If we consider rural elites to be the standard group, a slight improvement in the expected reduction is noticed for rural and urban non-elites (presented in Table 7.8). The situation for rural and urban sub-elites remains the same. No effect is found on the pattern of urban elites. That is, the observed and the expected pattern would be the same, even if women in the urban elite group had the characteristics of their rural counterparts. This suggests that if everything remains unchanged, the urban elites will show the highest level of fertility. The plausible explanation for this is that increase in social position increases fertility through improved nutrition (i.e., fecundity), a short period of breastfeeding and post-partum abstinence.

However, the possible link between health or nutrition cannot be an explanation for the difference between the fertility level of rural and urban elites. Both groups are in a position to have enough food. The small difference in fecundity that may exist between these two groups is minor, and evidence suggests that health and nutrition is unlikely to

TABLE 7.7

DISTRIBUTION OF OBSERVED AND EXPECTED AVERAGE NUMBER OF CHILDREN EVER BORN TO NON-ELITE, SUB-ELITE AND ELITE WOMEN IN RURAL AND URBAN AREAS (WHEN URBAN ELITE IS THE STANDARD GROUP), BANGLADESH 1975–76

Social Groups	Observed Average	Expected Average	Difference
Rural Non-Elites	4.0	3.3	–0.7
Rural Sub-Elites	3.8	3.3	–0.5
Rural Elites	3.6	3.8	+0.2
Urban Non-Elites	3.9	3.4	–0.5
Urban Sub-Elites	4.1	3.6	–0.5
Urban Elites¶	3.9	—	—

Source: BFS data analyses.
¶Standard Group.

TABLE 7.8

DISTRIBUTION OF OBSERVED AND EXPECTED AVERAGE NUMBER OF CHILDREN EVER BORN TO NON-ELITE, SUB-ELITE AND ELITE WOMEN IN RURAL AND URBAN AREAS (WHEN RURAL ELITE IS THE STANDARD GROUP), BANGLADESH 1975-76

Social Groups	Observed Average	Expected Average	Difference
Rural Non-Elites	4.0	3.2	-0.8
Rural Sub-Elites	3.8	3.3	-0.5
Rural Elites¶	3.6	—	—
Urban Non-Elites	3.9	3.3	-0.6
Urban Sub-Elites	4.1	3.6	-0.5
Urban Elites	3.9	3.9	0.0

Source: BFS data analyses.
¶Standard Group.

have a major impact on fertility in today's less developed countries (Gray, 1983; Bongaarts, 1980; Menken et al., 1981). Although malnutrition has been found by Chen and Chaudhury (1975) to depress fertility in Bangladesh, that may be applicable to the non-elites, and not the elites.

Breastfeeding and post-partum abstinence may be the clue to this difference between the rural and the urban elites, as a short period of breastfeeding causes early return to ovulation and increases the chance of pregnancy. The bulk of evidence (reviewed by Nag, 1983) suggests that urban women, especially the educated and the rich, demonstrate lower average duration of breastfeeding. For instance, in Nigeria, for every level of education, rural rich women show a higher average duration of breastfeeding than their urban counterparts (Lucas, 1977). Cultural pressure, diffusion of bottle feeding and Western ideas play a big role in this regard. As Muslim women are required to be under *purdah*, exposing of their breasts even to feed their infants in the presence of others is not acceptable. In rural areas, a deviation from this is not uncommon, but in urban areas, this is rare (Nag, 1983:177). The perception of female breasts as symbols of sexual attraction and physical beauty, an influence of Western ideas, is another reason. The convenience and the prestige value of bottle feeding not only attracted women of higher socio-economic status in urban areas, but also the urban poor and rural women (Nag, 1983:177; Greiner, 1979:67; and Morgan, 1971:110).

Based on the expected reduction in fertility, rural elites seem to be a better standard group. As well, rural elites have the lowest fertility. But the decision is somewhat unrealistic, because urban people cannot be reduced to the situation where they will possess the characteristics of the rural elites. On the other hand, possessing the characteristics of urban elites tends to increase the fertility level of rural elites. This is congruent with the mechanism through which the relationship of higher social position and fertility works. In this respect, the urban elites would be a logical choice. With a higher level of fertility than the rural elites though, the urban elite group cannot be taken as a standard for all groups. Under these circumstances, selecting two standard

groups — rural elites for rural and urban elites for urban areas — seems to be a better choice, as two different patterns of fertility have emerged from the findings of this study.

Standardization is not a serious issue in the explanation of fertility of the groups. Standardization helps project a fertility trend with respect to different social groups, which can be used for national policy formulations, but it does not seem to help conceptualize differential fertility and its determinants in the context of Bangladesh. Consequently, it may have very little use in policy formulations. Two main issues can be pointed out here. First, although a differential level of fertility is observed for the groups, differences between the groups are small and the levels themselves high. As a result, the rate of natural increase (which is the sole cause of population growth in Bangladesh, as external migration is virtually nil) remains very high. As we can see urban sub-elites and elites have the highest average number of children living (a measure of natural increase) per woman. For rural areas also, the elites have the highest average number of children living per woman. This suggests that although rural fertility is negatively related to group position, the growth rate demonstrates a positive association with group position. For urban groups, the growth rate is also positively related to the social hierarchical position of people, despite a curvilinear relationship with fertility. That is, the growth rate, not the fertility rate, should be the point of focus. Therefore, it can be stated that as the growth rate of the population is higher among the elites, they cannot be taken as a reference group to project future trends, despite their relatively low level of fertility.

The second issue relates to the question of why elites have the highest growth rate, despite having the lowest child mortality. Declines in child mortality do not lead to declines in fertility in Bangladesh. Other socio-economic and politico-cultural factors are so dominant that regardless of the groups' position, people tend to try for more children. It should be noted that even though child mortality is lowest among the elites, the overall level is still high compared to developed and some less developed countries. But it cannot be stated with certainty that people would respond to lower fertility, if child mortality was low enough to ensure a certain level of child survival because of the absence of

macro level incentives for fertility reduction, perceived advantages in the relations of production from having more children and socio-cultural pressure emanating from religio-agrarian beliefs and practices.

The blend of religious beliefs and agrarian cultural norms is rooted so deeply in the social structure that people interpret religious codes in accordance with their way of life. Despite the absence of a significant effect on elites in both rural and urban areas, Muslim religiosity has a great influence on the practices of the people of Bangladesh. Studies (e.g., Scheiffelin, 1967; Mahmood, 1977; Directorate of Population Control and Family Planning, 1977 and n. d.) show that there is nothing in the Qur'an that directly speaks for or against contraception; rather all founders of Muslim sects decree that birth control is permissible. Islamic jurists even approve abortion within 17 weeks of conception. People still are reluctant to practice contraception. Why are Bangladeshi people more conservative on the question of controlling reproduction than Islamic Laws require? This may be explained in part by the lack of real knowledge of religious laws and their interpretation and explanations regarding the regulation of procreation. People probably depend on what Islam says based on their own beliefs, superficial knowledge and interpretation. An example would typify the situation. A Qur'anic verse states: "Your women are lands for you; so plough them as you wish". This is interpreted by Hazrat Abu Hanifa (the founder of the prevalent Hanafi sect in Bangladesh) as "He means you can cohabit with your women with or without contraception ('azle)" (Mahmood, 1977:17, cited in Maloney et al., 1981:237). But the followers of the Hanafi school of law and theology do not know these laws and their interpretation. Even the religious spokesmen are in the same boat. This ultra-conservatism may be a justification and rationalization of the deep-seated pro-fertility sentiment of the agrarian way of life permeating through the traditional agrarian socio-cultural institutions.

Under the circumstances, other structural variables (e.g., urbanization) do not have any effect on people's attitude toward fertility. Although migration from rural to urban areas confounds the effect of urbanization, it can be stated that people living in an urban setting actually reflect simultaneously two value systems — one full of traditional

agrarian norms and the other with non-traditional. But the traditional values take over the non-traditional ones because of the dominance of religio-cultural institutions. Whether the religio-cultural influence can be eliminated or reduced by improving the social structural conditions is hard to tell. Currently, the level of socio-economic conditions and the government policies to improve the situation fail to do so.

The population control programmes have been devised in such a way that they do not appear to have any impact on people's motivation. Ironically, the strategies for population control are formulated by a group of people drawn from the elites (e.g., the bureaucrats), who portray non-elites as the targets for fertility reduction. They fail to (or are reluctant to) realize that part of the population growth lies with their own group's fertility pattern. The reason for this may be the attitude towards the whole issue. As contraception seems to have a negative meaning to the common people, a high growth rate may also have a negative connotation to the people from upper stratum. Since high population growth is recognized as the number one problem of the country, relating oneself to it seem to be thought of as a put down or loss of prestige in the society. Therefore, if a high growth rate is a problem to the society, it must be linked to the masses of the lower stratum.

The negative perception and attitude toward the population issue may have arisen from the feudalistic chauvinist mentality (an historical heritage) that presupposes elites as pure and free of vice and problems. They are the rulers of the society, and rulers do not constitute part of any problem. It is difficult to determine whether this kind of thinking has prompted the projection of large families and related problems from non-elites in the mass media propaganda. A possibility in that light cannot be ruled out. However, the strategy does not seem to work. The elites miss a golden opportunity to be role models to the masses, probably because of this negative attitude. Consequently, very promising plans on paper fail to achieve success. This situation is perpetuated by the national and international political and economic terms and conditions, as population programmes are integrated with other national development schemes which depend mainly on foreign assistance.

In conclusion, the findings indicate a very satisfactory fit to the theoretical framework of this study. It can be said that the fertility of people from all walks of life in Bangladesh is determined primarily by duration of marriage (combination of current age and age at first marriage) and child mortality. However, other determinants also affect fertility depending on the people's position in the social hierarchy. That is, different groups of people have different factors that affect fertility, despite the same overall rationale behind reproductive behaviour. Therefore, instead of formulating a single model of fertility for all groups, a series of group-specific models should be developed, such as, a model of fertility for rural elites, a model for rural sub-elites, a model for urban elites, etc. Each of these models will help not only in understanding the dynamics of fertility for specific groups, but also in providing us with a proper feedback for policy formulations. An illustration can be presented in this regard. A model of fertility for rural non-elites that has emerged from the findings of this study is as follows:

$$E[CEB] = \text{Constant} + b1*DM + b2*CM + b3*MR + b4*FE + b5*PSEB - b6*FLFP \quad (4)$$

where, E[CEB] = Expected Number of Children Ever Born

DM = Duration Marriage

CM = Child Mortality

MR = Muslim Religiosity

FE = Female Education

PSEB = Proportion of Sons Ever Born

FLFP = Female Labour Force Participation

b1 through b6 = Regression Coefficients

According to this model, fertility of rural non-elites is determined positively by duration of marriage, child mortality, proportion of sons ever born, Muslim religiosity and female education, and negatively by female labour force participation. The positive effect of the proportion of sons ever born suggests a preference for a large family,

regardless of the gender of the children. Because of a relatively greater influence of religious education, formal education of people in this group has a positive effect on the number of children ever born. In a similar vein, models for other groups also can be developed based on the findings of this study.

The policy implications of the model proposed above for the rural non-elites are clear. Several strategies can be devised to tackle the fertility situation of this group. The model shows that fertility is determined by a combination of several factors, some of which can be dealt with relatively easily, while others pose great difficulty. For instance, with an appropriate programme of action, child mortality can be reduced drastically in a short period of time, but the effect of Muslim religiosity is very difficult to eliminate given that the people are not only less literate, but also unaware of the real interpretation of the religious codes. A total elimination of the effect of religiosity from the thought process of the people is impossible, as the blend of religion and culture generates a behaviour pattern peculiar to Bangladesh society. However, the effect can be reduced to an extent by educating people with the actual interpretation of the religious codes of conduct, where people can be able to make a rational and functional choice with the improvement in other conditions (such as, increased education, labour force participation). It should be pointed out that Muslim religiosity can also play a positive role in reducing some of the inequality in social hierarchy through a proper application of Islamic ethos of equality and brotherhood.

The issue of religion is politically perceived as very touchy and no one wants to disturb the sentiment of the people. At the same time, religious sentiment is being exploited by the political parties, especially after resumption of power. This is probably a consequence of a fear of losing control of political power, which in turn, results in a maintenance of *status quo* and ultimately stagnancy in every sphere of social life. Like Iran, the political leaders could use religion as a positive vehicle of social development.

We know from the earlier discussion that the elites (both political and bureaucratic) are the ones who formulate policies, and they are reluctant to devise programmes that enjoin them to change their own *status quo*. They are also reluctant to realize that the existing systems have become stagnant and dysfunctional. This dysfunctional *status quo* is reinforced by a large gap that exists between the people and the political processes of the country. The political parties fail to provide a clear vision of their programme of action. An elimination of this gap is necessary for the development of pragmatic strategies to tackle the issues of social development (a facet being the reduction of fertility). The role of government is very crucial in this regard. A government with a strong and committed social and political leadership is necessary to break the stagnancy, if the country is to be freed from the vicious circle of poverty, underdevelopment and dependence on foreign aid.

Chapter VIII

SUMMARY, CONCLUSIONS AND DIRECTIONS FOR FUTURE RESEARCH

A. Major Findings and Discussion

In the existing literature to date, group differentials of fertility levels and their determinants have been analysed in conventional ways of bivariate or multivariate analysis. This seems to be an one dimensional approach which fails to provide us with an integrated picture of the dynamics in terms of the hierarchical position of people in the society. This study has attempted to analyse differential fertility patterns and their determinants for the ever-married women in their reproductive ages in terms of the hierarchical position of people in the society of Bangladesh. Data from the Bangladesh Fertility Survey 1975-76 (World Fertility Survey Project) have been employed in this study.

A composite index has been constructed combining some selected social indicators — husband's education and occupational prestige, frequency of animal protein consumption per week, modern objects and number of cattle owned by the households and use of efficient contraception. Based on the composite index scores of elitism, three social groups — non-elites, sub-elites and elites (roughly analogous to lower, middle and upper classes) — have been delineated for both rural and urban areas. The non-elites, the sub-elites and the elites form 79.4, 15.3 and 5.2 per cent of the population, respectively (84.5, 13.3 and 2.2 per cent in the rural, and 61.3, 22.6 and 16.1 per cent in the urban areas of Bangladesh, respectively).

Concerning fertility levels and patterns, the following broad generalizations were expected from the findings of this study:

(a) overall level of fertility is lower in urban than in rural areas;

(b) urban groups have lower fertility than that of their rural counterparts;

(c) in both the rural and urban settings, the fertility level has a negative association with the group position; and

(d) rural non-elites have the highest and urban elites the lowest fertility level.

While generalization (a) is found to exist, (d) does not emerge. Generalizations (b) and (c) can be drawn only partially from the findings. On an average, Bangladeshi women give birth to four children. The difference between the rural and the urban level is not substantial in magnitude, but a differential prevails. While rural women have four, urban women have an average of 3.9 children ever born to them. This overall rural-urban differential is not reflected in the social groups examined in each residential area. Only the rural non-elites are found to be in accordance with the overall rural-urban pattern. The sub-elites and the elites have higher fertility levels in urban than in rural areas. Each of these two urban groups has an average of 0.3 children more than the rural groups.

Two different patterns of fertility seem to have emerged. For rural groups, a distinct inverse relationship with social group position is found. Starting from an average of four children for non-elites, women in each immediately higher group have an average of 0.2 children less. That is, rural non-elite, sub-elite and elite women have an average of 4.0, 3.8 and 3.6 children ever born, respectively. However, the urban groups do not conform to this pattern. They display a curvilinear pattern of fertility with the non-elites and the elites having the same average number of children ever born. The sub-elites show the highest level of fertility irrespective of place of residence — an average of 4.1 children ever born — tending to lend support to the popular belief that people from the middle stratum of the society are the generators of the highest level of fertility. The levels shown by the rural groups contradict this popular belief. This may be true for urban areas. Instead of urban elites (as expected), rural elites have the lowest fertility; and urban sub-elites have the highest fertility level, which was expected of the rural non-elites.

Both bivariate and multivariate analyses have been performed with some selected demographic, social, economic and cultural determinants to examine their differential association with fertility. A summary measure of cumulative fertility, children ever born, is used as the dependent variable. The correlates included in the multivariate model are: child mortality, age at first marriage, duration of marriage, female education, labour

force participation, and childhood place of residence, Muslim religiosity and proportion of sons ever born.

The findings reveal that demographic factors, duration of marriage and child mortality, are the most important determinants of fertility for all three groups in both rural and urban areas. Cultural factors of proportion of sons ever born and Muslim religiosity are second in relevance. Socio-economic factors, such as female education and labour force participation, place a distant third in importance.

Proportion of sons ever born achieves significance in affecting fertility for both rural and urban non-elites and sub-elites. The positive direction in effect tends to contradict the research hypothesis though. When the complementary measure (proportion of daughters ever born to children ever born) is entered into the model, the effects are also found to be significantly positive, indicating that in an equal distribution of girls and boys in the family, gender preference is not a matter of choice. Muslim religiosity is significant for rural non-elites and sub-elites, and urban non-elites, indicating the expected influence of religious beliefs and practices on the people of the lower strata of society. Despite the lack of significant effect of proportion of sons ever born and Muslim religiosity, domination of these factors seems to continue in the upper stratum, which is reflected in the effects of the socio-economic determinants.

Female education affects rural non-elites positively and urban elites negatively. The positive effect of education in the rural non-elite group is probably caused by the influence of religious education over secular education. Labour force participation has significant effects on the fertility of rural non-elites, urban non-elites and urban sub-elites, not because of the effect of changed attitude caused by occupational prestige, but because of the spontaneous effect of labour force participation probably through the temporary separation of spouses. The relatively weaker effects of the socio-economic factors signify (a) the overall low level of these conditions, and (b) the domination of cultural institutions that have been prevailing in the society for a long time.

The significance levels and directions in effects of some of the determinants indicate patterns that are somewhat contrary to the fertility levels of the groups and put constraints on the explanation. For instance, female education significantly and negatively affects fertility of urban elites, and positively, though not significantly, of rural elites, despite the fact that these groups have relatively low fertility levels. At low levels of fertility, it is normally expected that female education will have a significant negative effect on fertility. Our data demonstrate that rural elites have a lower average age at first marriage, a low proportion of female labour force participation, and higher child mortality than urban elite women. These differences should be sufficient to raise the rural fertility levels, but it does not happen. The only characteristic favourable to low fertility for rural elites is a lower duration of marriage. Rural elite women spend an average of 5.5 months less in the married state than their urban counterparts. This cannot be the sole cause of the lowest fertility level.

The causes of these irregularities (if they are to be considered as irregularities) may be attributed to the composite index used to stratify the population. Either the proxies used for some of the dimensions (e.g., number of cattle owned for the amount of land owned) are not good enough, or the criteria used to make the cut off points for the delineation of the groups are not precise enough to capture the group characteristics. But capturing the absolute characteristics of any social group is impossible since the data set used was collected with other purposes than stratifying people through a composite index. Even allowing for the measurement problems inherent in the indicators (discussed at length in Chapter Four), our sensitivity analysis as denoted by the Gamma coefficients, indicated a very high correlation between the two distributions of groups — one by each indicator separately, and another by the composite index. That means, the composite index is adequate in demonstrating validity.

As the problems are found in the urban groups, especially the sub-elites and the elites, it can be said that if the criteria for the cut off points in delineating the groups are made relatively more restrictive for the urban areas, expected patterns in levels of fertility would emerge. In view of the codings in the data set, we exercised the best

possible restrictions in delineating the cut off points. Even if the data set allowed us to be more restrictive for the urban areas only, the issue would raise a methodological question of validity and preferential bias, which in turn would create problems in the comparability of findings.

Before drawing any conclusion, it must be pointed out that until now all the expectations about the observed patterns and the effects of the determinants of fertility are based on rationalizations drawn from the experience of western industrialized countries. Every time we mention "an unexpected pattern", or results "contrary to the general expectation", we imply the situation in Bangladesh is similar to that in the countries that fulfilled those expectations. The expectations in the context of Bangladesh are unrealistic, because the country, its people and its heritage are so unique that the search for a so-called secular rational explanation would be a Utopian endeavour.

Instead of looking for expected results, it is important to ask, for instance, why the urban groups showed this unique pattern? One explanation could be the role of migration. It is very well established that a great amount of rural to urban lifetime migration occurs in Bangladesh. Data show that a vast majority of urban non-elite, sub-elite and elite women reported that they and their husbands were raised in a rural setting. Very high proportions of the urban population with rural background are bound to have a positive effect on the overall level of urban fertility. It is not possible from the BFS data to determine at what age the migration took place. The availability of details would facilitate a study of the effect of migration on fertility.

A general statement can be made based on the high proportions of population movement toward urban areas that, because of being in the transitional phase of social and cultural adjustment, the middle group (i.e., the sub-elites) shows the highest fertility level. What about the fertility level of non-elites, which shows the same level as the elites? The fertility level of non-elites may have been lowered (compared to sub-elites) by higher nutritional deficiencies and participation in occupations that tend to separate spouses. Better nutritional intake and non-participation in the labour force may have kept the fertility level somewhat high for the elites. The definition of urban areas also

may have some effect on the estimates of the levels of fertility. We know that urban areas in Bangladesh are the concentration of population with rural attributes. In this situation, the effect of urbanization is difficult to expect. A better picture could be obtained, if the urban areas could also be distinguished by quality and way of life criteria.

B. Conceptual and Methodological Implications

The conceptual orientation of this study is based on a political demographic perspective in explaining the situation of high fertility in Bangladesh. According to this framework, social, cultural, economic and political (both internal and international) conditions influence the development policies in general, and population planning programme in particular. The macro-level conditions perpetuate the existing social and cultural institutions, which in turn significantly affect the individual level fertility behaviour of the people. This perspective offers an important contribution to better evaluate the country's existing population control policies.

The methodological approach employed in this study is not new to demographers, but this research presents the first application of the approach in national level fertility analysis for Bangladesh. This approach assists in obtaining an integrated picture of the situation by taking into account the overlaps generated by the conventional approaches. As a consequence, it sheds new light on the existing demographic wisdom. For instance, existing knowledge shows that the fertility is positively related to the amount of land people own. From this, the conclusion is that rich families (usually measured by land size) in the rural areas are inclined to have high fertility, but the findings of this study show the opposite state of affairs. Rural elites have the lowest fertility level. This goes against the popular belief that fertility is positively related to rural people with large landholdings. This is because analyses identifying social groups based on only one dimension (e.g., rural group distinction based on only landholding size) do not disclose the essence of the group's relationship to fertility.

If the research hypothesis is re-phrased such that the rich families have a larger family size, the overall findings of this study would support it. Why? The answer is very simple; because the re-phrased hypothesis highlights the growth rate instead of the fertility rate. Because of their lowest levels of child mortality, the population growth rate is the highest among the elites, despite a slightly below average number of children ever born to them. The conclusion that emerges from this study is that it is the growth rate, not fertility, that is positively related to the elites' higher social position. Their higher rate of natural increase entails high social prestige and domination in the social hierarchy of Bangladeshi society.

Another common conclusion generated by other studies is that urban fertility is lower than rural fertility. The findings of the present study do not support this contention. When this relationship is examined in terms of the social groups in this study, the urban levels show higher fertility than the rural levels, especially for the sub-elites and the elites. This outcome may be due to the analysis having being based on the simple dichotomy of rural-urban, which is an over-simplification of urbanism or rurality and social position. Examination of the relationship in terms of the social hierarchical position of people brings out a more realistic relationship with fertility. In addition to high fertility, the urban sub-elites and the elites have the highest growth rate. Therefore, the sub-elites and the elites are the main triggerers of the high rate of population growth in both rural and urban areas of the country; thus, it is not just the rural middle class, as suggested by Maloney et al. (1981) that is responsible for high levels of population growth in the nation.

C. Limitations of the Study

The major limitation of this study relates to the data set. Due to the absence of some important variables in the data set, the composite index of elitism may fall short of capturing the whole dynamics of the social hierarchy. Measurement problems in the indicators used to construct the composite index of elitism may also have contributed to complications of validity. However, considering the purpose related to this study, a

special survey based on better sampling representation and data measurement would increase the precision of the estimates reported in this study, but there is no guarantee that, in the overall sense, dramatically different results would be found. Considering the quality of these data used here relative to other existing national level sources, it can be stated that the composite index of elitism compiled in this thesis provides the best possible approximation of the social hierarchy in Bangladesh.

The validity of the procedure for the identification of the social groups may be questioned. Although the criteria used for the delimitation of the cut off points in the elitism scale are based on practical knowledge and experience of the society in question, they are still arbitrary decisions. But, in the absence of established procedures in the literature, our method seemed to be the best way to handle the situation. The alpha and the gamma coefficients indicate strong support for the derived social groups in the society.

The absence of information on some important variables has handcuffed us in translating the whole conceptual model into a statistical exercise. The absence of direct information on certain variables (e.g., Muslim religiosity, landholding size) has also forced us to use proxy measures. The use of proxy measures provide only an indirect indication of reality. Problems in data measurement aggravate the situation further. No other alternatives exist, as other national level data sources (e.g., Censuses, National Contraceptive Prevalence Surveys) provide the same type of data provided by the BFS. The BFS data source is better than the others in the sense that it provides greater details, coverage and quality.

D. Policy Implications

As it is not possible to drastically raise female age at first marriage as a means to curtail the duration of marriage, and hence fertility, in a short period of time, marital fertility can more readily be controlled only by the use of effective contraception. But to do so successfully, the status of women in society must be raised to a level that could promote a radical shift of values from old to new. In that respect, men in the society

have a significant role to play. In traditional agrarian society such as Bangladesh, dominated by the Muslim religion, the role of husband is crucial. Any decision taken in the family is generally decided by males — husband, son, father-in-law, grandfather, and the like. Therefore, in order to raise the status of women, great attention should be given to the role of men in the family and the society. Unfortunately, this aspect has not been given any attention at all in Bangladesh.

Although socio-economic factors in this study do not seem to have much influence on human reproductive behaviour in Bangladesh, ultimately they will have some impact on people's thought processes and how they view their world and their lives, if and when socio-economic status is raised considerably. However, education alone does not provide much incentive to the common people of the country to reduce fertility. Therefore, the development programmes should be formulated very carefully. Rural development programmes should be carved out in such a way that the involvement of women is encouraged at both personal and community levels.

A two-stage development programme can be devised. In the first stage, women should be involved in work regardless of the educational requirement. At the second level, jobs should be created which will require a certain level of education to be provided by the organization (private or public) in which the women are employed. The educational curricula should be devised in accordance with the requirements of the work, and the importance of birth control should be simultaneously stressed. In so doing, the real knowledge about fertility regulation based on the interpretation of the Islamic tenets by the religious sect leaders should be disseminated. Until the illiteracy about the religious knowledge about the concept of family and child birth is removed from the society, the effect of formal education cannot be expected. The existing policy of compulsory and free education should be reinforced. This may not only help delay age at marriage, but also remove the reservoir of mothers' helpers at home to take care of the babies. If mothers have to work and there is no one to provide child care, they will look for means to prevent childbirths.

Existing facilities for maternity and child health care should be intensified and improved. The mass media should be directed in such a way that people from the upper strata realize that the child mortality levels are lower for them in relation to others, and they would not have to produce a large number of children as an attempt to replace children who may eventually die.

To diffuse the use of modern contraception throughout the society, a two pronged mass media propaganda should be attempted — one for the people of the lower and the other for the upper stratum. Emphasis should be on the upper stratum so that people from the lower stratum follow the behaviour pattern of their role models. To ensure people's participation in the programmes, family planning workers at every level should believe in themselves and their strategies, and put an honest effort in executing them.

Finally, the government should exhibit greater commitment and dedication in devising policies and executing them through people's participation. In so doing, the political leadership should educate themselves about the population issues; they must elaborate explicit population policies in their programmes of action. Opposition parties should plan ahead; that way, when they gain power, it will be easy for them to devise appropriate strategies and policies on the one hand, and people will start to believe in their policies by participating before and after their resumption of power, on the other.

E. Directions for Future Research

In order to realize the full potential of the conceptual model of this study, and to substantiate the methodologies and findings derived, independent studies are required. Some of the assumptions in our conceptual framework could not be pursued in the statistical model because the required data (e.g., data on community level background variables) were not available. Lack of access to these data made it difficult to translate the theoretical model into a statistical one. As a further extension of this study, inclusion of the background variables would provide a better analysis.

Characteristics for the husband and of the household could not be used at both levels of analyses — in the construction of the composite index scale and in the multiple regression models. This can be rectified in future studies by using appropriate sampling techniques so that the different social groups will have a sufficient number of cases. Some criterion variables have to be included in the questionnaire to facilitate the validation of the index internally. Direct measures are required for all the variables included in this analysis. The scale of measurement should be the same for the indicators used to construct the elitism index.

Future studies should be attempted to study the effect of migration on fertility in order to better understand the effects of urbanization on fertility. Two separate studies — one for people who never moved, and another for those who moved in both rural and urban areas, might provide an interesting insight into the influence of migration on fertility. Parity information by occupational status are required to resolve the problem of the causal direction of the effect of occupation on fertility. A prospective study with information on births of children with reference to date of starting work and length of time worked would provide a good opportunity to examine whether lower fertility enables women to join the labour force or joining the labour force causes lower fertility. A prospective panel study methodology can be pursued in this regard.

Other methods of analyses, which were not within the scope of this study, could be used in future studies. For instance, a dummy variable analysis for education and occupation would provide an opportunity to determine a threshold level of the effects of these two factors in depressing fertility. Causal modelling could be attempted to demonstrate the direct and the indirect effects of the determinants of fertility. Log-linear modelling of the fertility process could be done to obtain a deeper insight into the matter.

Finally, future studies in differential fertility should be directed in relation to the hierarchical social groups because of the conceptual and methodological advantages over the other approaches. Group-specific fertility models should be elaborated so that the interpretation and implications of the findings become clear.

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APPENDIX

TABLE A.5.1

AVERAGE TAKA VALUE¶ ASSIGNED TO MODERN OBJECTS POSSESSED BY THE HOUSEHOLDS IN THE BANGLADESH FERTILITY SURVEY, 1975-76

Modern Objects	Taka Value	Cum. Value
None	0	0
Tea Set	100	100
Iron	300	400
Watch/Clock	300	700
Bedstead	500	1,200
Radio	500	1,700
Boat	500	2,200
Bicycle	1,000	3,200
Sewing Machine	3,000	6,200
Television	4,000	10,200
Refrigerator	10,000	20,200
Motor Cycle	10,000	30,200

¶ The Taka values are based on the approximate price level at the survey time period, 1975-76.

TABLE A.5.2

PERCENTAGE DISTRIBUTION OF SOCIAL GROUPS BY LEVEL OF HUSBAND'S EDUCATION AND CURRENT PLACE OF RESIDENCE, BANGLADESH 1975-76

	Rural				Urban			
	Non-Elites	Sub-Elites	Elites	Total	Non-Elites	Sub-Elites	Elites	Total
Level of Education	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)
No Education	69.0 (2775)	6.0 (38)	—	59.1 (2813)	62.2 (512)	8.6 (26)	—	40.1 (538)
Below Primary (1-4 years)	17.2 (693)	3.3 (21)	—	15.0 (714)	21.6 (178)	5.0 (15)	—	14.4 (193)
Primary (5 years)	6.3 (252)	22.6 (143)	—	8.3 (395)	5.5 (45)	18.2 (55)	0.9 (2)	7.6 (102)
Below Secondary (6-9 years)	7.2 (288)	34.7 (219)	3.8 (4)	10.7 (511)	10.3 (85)	41.9 (127)	4.2 (9)	16.5 (221)
Secondary (10 years)	0.2 (9)	22.6 (143)	51.0 (53)	4.3 (205)	0.4 (3)	16.2 (49)	32.9 (71)	9.2 (123)
Post Secondary (11+ years)	0.1 (3)	10.8 (68)	45.2 (47)	2.5 (118)	—	10.2 (31)	62.2 (134)	12.3 (165)
Total	100.0 (4020)	100.0 (632)	100.0 (104)	100.0 (4756)	100.0 (823)	100.0 (303)	100.0 (216)	100.0 (1342)

Source: BFS data analyses.
Note: N = Number of cases.

TABLE A.5.3

PERCENTAGE DISTRIBUTION OF SOCIAL GROUPS BY HUSBAND'S OCCUPATIONAL STATUS AND CURRENT PLACE OF RESIDENCE, BANGLADESH 1975-76

	Rural				Urban			
	Non-Elites	Sub-Elites	Elites	Total	Non-Elites	Sub-Elites	Elites	Total
Occupation Categories	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)
No Work	0.5 (20)	0.6 (4)	—	0.5 (24)	0.5 (4)	0.7 (2)	—	0.4 (6)
Household	0.1 (4)	—	—	0.1 (4)	0.2 (2)	—	—	0.1 (2)
Agricultural	66.6 (2677)	46.4 (293)	12.5 (13)	62.7 (2983)	21.6 (178)	4.6 (14)	—	14.3 (192)
Skilled-Unskilled	22.3 (897)	9.0 (57)	3.8 (4)	20.1 (958)	49.3 (406)	15.5 (47)	0.5 (1)	33.8 (454)
Services	1.2 (47)	2.8 (18)	2.9 (3)	1.4 (68)	4.0 (33)	7.6 (23)	4.6 (10)	4.9 (66)
Sales	7.9 (318)	18.4 (116)	15.4 (16)	9.5 (450)	19.5 (160)	40.3 (122)	24.5 (53)	25.0 (335)
Clerical	0.6 (23)	7.3 (46)	5.8 (6)	1.6 (75)	3.5 (29)	20.5 (62)	16.7 (36)	9.5 (127)
Professional	0.8 (34)	15.5 (98)	59.6 (62)	4.1 (194)	1.3 (11)	10.9 (33)	53.7 (116)	11.9 (160)
Total	100.0 (4020)	100.0 (632)	100.0 (104)	100.0 (4756)	100.0 (823)	100.0 (303)	100.0 (216)	100.0 (1342)

Source: BFS data analyses.
Note: N = Number of cases.

TABLE A.5.4

PERCENTAGE DISTRIBUTION OF SOCIAL GROUPS BY IMPUTED TAKA VALUE OF MODERN OBJECTS POSSESSED BY THE HOUSEHOLDS AND CURRENT PLACE OF RESIDENCE, BANGLADESH 1975-76

	Rural				Urban			
	Non-Elites	Sub-Elites	Elites	Total	Non-Elites	Sub-Elites	Elites	Total
Modern Objects in Taka Value¶	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)
Nothing	81.5 (3276)	21.5 (136)	1.0 (1)	71.8 (3413)	74.0 (609)	19.5 (59)	—	49.8 (668)
Tk.500 or Less	6.8 (273)	17.1 (108)	10.6 (11)	8.2 (392)	12.3 (101)	25.7 (78)	6.0 (13)	14.3 (192)
Tk.501-1000	7.9 (317)	19.8 (125)	15.4 (16)	9.6 (458)	7.5 (62)	13.2 (40)	9.3 (20)	9.1 (122)
Tk.1001-1500	2.1 (83)	13.9 (88)	16.3 (17)	4.0 (188)	1.8 (15)	12.9 (39)	13.9 (30)	6.3 (84)
Tk.1501-2500	1.4 (58)	16.8 (106)	28.8 (30)	4.1 (194)	3.3 (27)	16.8 (51)	13.0 (28)	7.9 (106)
Tk.2501-5000	0.3 (12)	8.1 (51)	12.5 (13)	1.6 (76)	1.1 (9)	6.6 (20)	21.3 (46)	5.6 (75)
Tk.5001-10,000	—	1.4 (9)	10.6 (11)	0.4 (20)	—	2.3 (7)	12.5 (27)	2.5 (34)
Tk10,001-15000	0.0 (1)	0.9 (6)	2.9 (3)	0.2 (10)	—	0.7 (2)	8.8 (19)	1.6 (21)
Tk.15,001+	—	0.5 (3)	1.9 (2)	0.1 (5)	—	2.3 (7)	15.3 (33)	3.0 (40)
Total	100.0 (4020)	100.0 (632)	100.0 (104)	100.0 (4756)	100.0 (823)	100.0 (303)	100.0 (216)	100.0 (1342)

¶ The Taka values are based on the approximate price level at the survey time period, 1975-76.
Source: BFS data analyses.
Note: N = Number of cases.

TABLE A.5.5

PERCENTAGE DISTRIBUTION OF SOCIAL GROUPS BY POSSESSION OF CATTLE AND CURRENT PLACE OF RESIDENCE, BANGLADESH 1975-76

	Rural				Urban			
	Non-Elites	Sub-Elites	Elites	Total	Non-Elites	Sub-Elites	Elites	Total
Number of Cattle	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)
None	52.3 (2102)	26.7 (169)	21.2 (22)	48.2 (2293)	76.9 (633)	74.3 (225)	79.2 (171)	76.7 (1029)
1-2	25.9 (1042)	21.4 (135)	21.2 (22)	25.2 (1199)	14.6 (120)	12.5 (38)	7.4 (16)	13.0 (174)
3-6	18.2 (732)	32.0 (202)	35.6 (37)	20.4 (971)	6.6 (54)	9.6 (29)	7.4 (16)	7.4 (99)
7-10	3.1 (125)	14.2 (90)	10.6 (11)	4.8 (226)	1.8 (15)	3.0 (9)	4.2 (9)	2.5 (33)
11+	0.5 (19)	5.7 (36)	11.5 (12)	1.4 (67)	0.1 (1)	0.7 (2)	1.9 (4)	0.5 (7)
Total	100.0 (4020)	100.0 (632)	100.0 (104)	100.0 (4756)	100.0 (823)	100.0 (303)	100.0 (216)	100.0 (1342)

Source: BFS data analyses.
Note: N = Number of cases.

TABLE A.5.6

PERCENTAGE DISTRIBUTION OF SOCIAL GROUPS BY MEAT/FISH CONSUMPTION AND CURRENT PLACE OF RESIDENCE, BANGLADESH 1975-76

	Rural				Urban			
	Non-Elites	Sub-Elites	Elites	Total	Non-Elites	Sub-Elites	Elites	Total
Frequency of Consumption	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)
Never	24.0 (966)	3.2 (20)	—	20.7 (986)	24.9 (205)	3.3 (10)	1.9 (4)	16.3 (219)
1-3 Days	38.8 (1558)	13.8 (87)	1.0 (1)	34.6 (1646)	36.1 (297)	13.2 (40)	2.3 (5)	25.5 (342)
4-6 Days	18.7 (753)	27.1 (171)	19.2 (20)	19.8 (944)	16.9 (139)	21.1 (64)	16.7 (36)	17.8 (239)
Daily	18.5 (743)	56.0 (354)	79.8 (83)	24.8 (1180)	22.1 (182)	62.4 (189)	79.2 (171)	40.4 (542)
Total	100.0 (4020)	100.0 (632)	100.0 (104)	100.0 (4756)	100.0 (823)	100.0 (303)	100.0 (216)	100.0 (1342)

Source: BFS data analyses.
Note: N = Number of cases.

TABLE A.5.7

PERCENTAGE DISTRIBUTION OF SOCIAL GROUPS BY USE OF EFFICIENT CONTRACEPTION AND CURRENT PLACE OF RESIDENCE, BANGLADESH 1975–76

	Rural				Urban			
	Non-Elites	Sub-Elites	Elites	Total	Non-Elites	Sub-Elites	Elites	Total
Type of Method	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)	Percent (N)
No Method	89.9 (3615)	76.9 (486)	51.0 (53)	87.3 (4154)	87.6 (721)	60.4 (183)	20.4 (44)	70.6 (948)
Inefficient Only	5.4 (217)	10.6 (67)	15.4 (16)	6.3 (300)	6.0 (49)	10.2 (31)	11.1 (24)	7.7 (104)
Efficient Only	4.7 (188)	12.5 (79)	33.7 (35)	6.3 (302)	6.4 (53)	29.4 (89)	68.5 (148)	21.6 (290)
Total	100.0 (4020)	100.0 (632)	100.0 (104)	100.0 (4756)	100.0 (823)	100.0 (303)	100.0 (216)	100.0 (1342)

Source: BFS data analyses.
Note: N = Number of cases.

TABLE A.5.8

DISTRIBUTIONS OF SOCIAL GROUPS BY HUSBAND'S EDUCATION AND THE COMPOSITE INDEX OF ELITISM, BANGLADESH 1975-76¶

Husband's Education	The Composite Index			
	Non-Elites	Sub-Elites	Elites	Row Total
		Rural		
Non-Elites	98.3	1.7	0.0	100.0
	(3468)	(59)	(0)	(3527)
	86.3	9.3	0.0	74.2
Sub-Elites	59.6	40.0	0.4	100.0
	(540)	(362)	(4)	(906)
	13.4	57.3	3.8	19.0
Elites	3.7	65.3	31.0	100.0
	(12)	(211)	(100)	(323)
	0.3	33.4	96.2	6.8
Column Total	84.5	13.3	2.2	100.0
	(4020)	(632)	(104)	(4756)
	100.0	100.0	100.0	100.0
Gamma=.97087§				
		Urban		
Non-Elites	94.4	5.6	0.0	100.0
	(690)	(41)	(1)	(0)
	83.8	13.5	0.0	54.5
Sub-Elites	40.2	56.3	3.4	100.0
	(130)	(182)	(11)	(323)
	15.8	60.1	5.1	24.1
Elites	1.0	27.8	71.2	100.0
	(3)	(80)	(205)	(288)
	0.4	26.4	94.9	21.5
Column Total	61.3	22.6	16.1	100.0
	(823)	(303)	(216)	(1342)
	100.0	100.0	100.0	100.0
Gamma=.96708§				

Source: BFS data analyses.

¶The first figure in each group of three is the row percentage; the second figure, in parenthesis, is the number of cases; and the third is the column percentage.

§Correlation between the distributions of social groups by husband's education and the composite index of elitism.

TABLE A.5.9

DISTRIBUTIONS OF SOCIAL GROUPS BY HUSBAND'S OCCUPATIONAL PRESTIGE AND THE COMPOSITE INDEX OF ELITISM, BANGLADESH 1975-76¶

Occupational Prestige	The Composite Index			
	Non-Elites	Sub-Elites	Elites	Row Total
		Rural		
Non-Elites	90.7	8.9	0.4	100.0
	(3598)	(354)	(17)	(3969)
	89.5	56.0	16.3	83.5
Sub-Elites	65.4	30.4	4.2	100.0
	(388)	(180)	(25)	(593)
	9.7	28.5	24.0	12.5
Elites	17.5	50.5	32.0	100.0
	(34)	(98)	(62)	(194)
	0.8	15.5	59.6	4.1
Column Total	84.5	13.3	2.2	100.0
	(4020)	(632)	(104)	(4756)
	100.0	100.0	100.0	100.0
Gamma = .78500§				
		Urban		
Non-Elites	90.2	9.6	0.2	100.0
	(590)	(63)	(1)	(654)
	71.7	20.8	0.5	48.7
Sub-Elites	42.0	39.2	18.8	100.0
	(222)	(207)	(99)	(528)
	27.0	68.3	45.8	39.3
Elites	6.9	20.6	72.5	100.0
	(11)	(33)	(116)	(160)
	1.3	10.9	53.7	11.9
Column Total	61.3	22.6	16.1	100.0
	(823)	(303)	(216)	(1342)
	100.0	100.0	100.0	100.0
Gamma = .87926§				

Source: BFS data analyses.

¶The first figure in each group of three is the row percentage; the second figure, in parenthesis, is the number of cases; and the third is the column percentage.

§Correlation between the distributions of social groups by husband's occupational prestige and the composite index of elitism.

TABLE A.5.10

DISTRIBUTIONS OF SOCIAL GROUPS BY MODERN OBJECTS OWNERSHIP AND THE COMPOSITE INDEX OF ELITISM, BANGLADESH 1975-76¶

Modern Objects Ownership	The Composite Index			
	Non-Elites	Sub-Elites	Elites	Row Total
		Rural		
Non-Elites	96.0	4.0	0.0	100.0
	(3276)	(136)	(1)	(3413)
	81.5	21.5	1.0	71.8
Sub-Elites	58.2	35.4	6.4	100.0
	(742)	(451)	(81)	(1274)
	18.5	71.4	77.9	26.8
Elites	2.9	65.2	31.9	100.0
	(2)	(45)	(22)	(69)
	0.0	7.1	21.2	1.5
Column Total	84.5	13.3	2.2	100.0
	(4020)	(632)	(104)	(4756)
	100.0	100.0	100.0	100.0
Gamma = .90002§				
		Urban		
Non-Elites	91.2	8.8	0.0	100.0
	(609)	(59)	(0)	(668)
	74.0	19.5	0.0	49.8
Sub-Elites	40.4	41.2	18.4	100.0
	(209)	(213)	(95)	(517)
	25.4	70.3	44.0	38.5
Elites	3.2	19.7	77.1	100.0
	(5)	(31)	(121)	(157)
	0.6	10.2	56.0	11.7
Column Total	61.3	22.6	16.1	100.0
	(823)	(303)	(216)	(1342)
	100.0	100.0	100.0	100.0
Gamma = .90689§				

Source: BFS data analyses.

¶The first figure in each group of three is the row percentage; the second figure, in parenthesis, is the number of cases; and the third is the column percentage.

§Correlation between the distributions of social groups by modern objects ownership and the composite index of elitism.

TABLE A.5.11

DISTRIBUTIONS OF SOCIAL GROUPS BY USE OF EFFICIENT CONTRACEPTION AND THE COMPOSITE INDEX OF ELITISM, BANGLADESH 1975-76¶

Contraception	The Composite Index			
	Non-Elites	Sub-Elites	Elites	Row Total
		Rural		
Non-Elites	87.0	11.7	1.3	100.0
	(3615)	(486)	(53)	(4154)
	89.9	76.9	51.0	87.3
Sub-Elites	72.3	22.3	5.3	100.0
	(217)	(67)	(16)	(300)
	5.4	10.6	15.4	6.3
Elites	62.3	26.2	11.6	100.0
	(188)	(79)	(35)	(302)
	4.7	12.5	33.7	6.3
Column Total	84.5	13.3	2.2	100.0
	(4020)	(632)	(104)	(4756)
	100.0	100.0	100.0	100.0
Gamma = .51754§				
		Urban		
Non-Elites	76.1	19.3	4.6	100.0
	(721)	(183)	(44)	(948)
	87.6	60.4	20.4	70.6
Sub-Elites	47.1	29.8	23.1	100.0
	(49)	(31)	(24)	(104)
	6.0	10.2	11.1	7.7
Elites	18.3	30.7	51.0	100.0
	(53)	(89)	(148)	(290)
	6.4	29.4	68.5	21.6
Column Total	61.3	22.6	16.1	100.0
	(823)	(303)	(216)	(1342)
	100.0	100.0	100.0	100.0
Gamma = .77041§				

Source: BFS data analyses.

¶The first figure in each group of three is the row percentage; the second figure, in parenthesis, is the number of cases; and the third is the column percentage.

§Correlation between the distributions of social groups by use of efficient contraception and the composite index of elitism.

TABLE A.5.12

DISTRIBUTIONS OF SOCIAL GROUPS BY MEAT/FISH CONSUMPTION AND THE COMPOSITE INDEX OF ELITISM, BANGLADESH 1975-76¶

Meat/Fish Consumption	The Composite Index			
	Non-Elites	Sub-Elites	Elites	Row Total
		Rural		
Non-Elites	95.9	4.1	0.0	100.0
	(2524)	(107)	(1)	(2632)
	62.8	16.9	1.0	55.3
Sub-Elites	79.8	18.1	2.1	100.0
	(753)	(171)	(20)	(944)
	18.7	27.1	19.2	19.8
Elites	63.0	30.0	7.0	100.0
	(743)	(354)	(83)	(1180)
	18.5	56.0	79.8	24.8
Column Total	84.5	13.3	2.2	100.0
	(4020)	(632)	(104)	(4756)
	100.0	100.0	100.0	100.0
Gamma = .72353§				
		Urban		
Non-Elites	89.5	8.9	1.6	100.0
	(502)	(50)	(9)	(561)
	61.0	16.5	4.2	41.8
Sub-Elites	58.2	26.8	15.1	100.0
	(139)	(64)	(36)	(239)
	16.9	21.1	16.7	17.8
Elites	33.6	34.9	31.5	100.0
	(182)	(189)	(171)	(542)
	22.1	62.4	79.2	40.4
Column Total	61.3	22.6	16.1	100.0
	(823)	(303)	(216)	(1342)
	100.0	100.0	100.0	100.0
Gamma = .73473§				

Source: BFS data analyses.

¶The first figure in each group of three is the row percentage; the second figure, in parenthesis, is the number of cases; and the third is the column percentage.

§Correlation between the distributions of social groups by meat/fish consumption and the composite index of elitism.

TABLE A.5.13

DISTRIBUTIONS OF SOCIAL GROUPS BY CATTLE OWNERSHIP AND THE COMPOSITE INDEX OF ELITISM, BANGLADESH 1975-76¶

Cattle Ownership	The Composite Index			
	Non-Elites	Sub-Elites	Elites	Row Total
		Rural		
Non-Elites	90.0	8.7	1.3	100.0
	(3144)	(304)	(44)	(3492)
	78.2	48.1	42.3	73.4
Sub-Elites	72.6	23.4	4.0	100.0
	(845)	(272)	(47)	(1164)
	21.0	43.0	45.2	24.5
Elites	31.0	56.0	13.0	100.0
	(31)	(56)	(13)	(100)
	0.8	8.9	12.5	2.1
Column Total	84.5	13.3	2.2	100.0
	(4020)	(632)	(104)	(4756)
	100.0	100.0	100.0	100.0
Gamma = .59332§				
Non-Elites	62.6	21.9	15.5	100.0
	(753)	(263)	(187)	(1203)
	91.5	86.8	86.6	89.6
Sub-Elites	51.6	28.2	20.2	100.0
	(64)	(35)	(25)	(124)
	7.8	11.6	11.6	9.2
Elites	40.0	33.3	26.7	100.0
	(6)	(5)	(4)	(15)
	0.7	1.7	1.9	1.1
Column Total	61.3	22.6	16.1	100.0
	(823)	(303)	(216)	(1342)
	100.0	100.0	100.0	100.0
Gamma = .20884§				

Source: BFS data analyses.

¶The first figure in each group of three is the row percentage; the second figure, in parenthesis, is the number of cases; and the third is the column percentage.

§Correlation between the distributions of social groups by cattle ownership and the composite index of elitism.

TABLE A.6.1

CORRELATION MATRIX OF VARIABLES CONSIDERED IN THE MODEL OF FERTILITY IN RURAL AREAS, BANGLADESH 1975-76
(N= 4756)

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
X1	1.000	.781***	.681***	.006	.040**	-.124***	.251***	.308***	-.003	-.129***
X2		1.000	.505***	-.020	.073***	-.182***	.212***	.269***	-.029*	-.322***
X3			1.000	-.008	.056***	-.127***	.137***	.178***	-.022	-.100***
X4				1.000	-.033*	-.035**	-.010	-.018	.012	-.055***
X5					1.000	-.092***	.035**	.011	.007	-.066***
X6						1.000	-.027*	-.043**	.165**	.188***
X7							1.000	-.430***	-.023	.074***
X8								1.000	.020	.049***
X9									1.000	.046***
X10										1.000

Source: BFS data analyses.

Note: X1= Children Ever Born.
X2= Duration of Marriage.
X3= Child Mortality.
X4= Muslim Religiosity.
X5= Female Labour Force Participation.
X6= Female Education.
X7= Proportion of Daughters Ever Born.
X8= Proportion of Sons Ever Born.
X9= Female Childhood Place of Residence.
X10= Female Age at Marriage.

*** P <.001; ** P <.01; * P <.05

TABLE A.6.2

CORRELATION MATRIX OF VARIABLES CONSIDERED IN THE MODEL OF FERTILITY IN URBAN AREAS, BANGLADESH 1975-76
(N= 1342)

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
X1	1.000	.756***	.614***	-.009	-.016	-.174***	.220***	.232***	-.075**	-.167***
X2		1.000	.451***	-.046*	.056*	-.246***	.169***	.181***	-112***	-.328***
X3			1.000	.024	.086***	-.231***	.103***	.134***	-.078**	-.142***
X4				1.000	.033	-.022	.028	-.036	.090***	-.116***
X5					1.000	-.081***	.005**	.049*	-.049*	-.104***
X6						1.000	.046*	.046*	.265***	.367***
X7							1.000	-.530***	.005	-.062*
X8								1.000	-.077**	-.076**
X9									1.000	.186***
X10										1.000

Source: BFS data analyses.

Note: X1= Children Ever Born.
X2= Duration of Marriage.
X3= Child Mortality.
X4= Muslim Religiosity.
X5= Female Labour Force Participation.
X6= Female Education.
X7= Proportion of Daughters Ever Born.
X8= Proportion of Sons Ever Born.
X9= Female Childhood Place of Residence.
X10= Female Age at Marriage.

*** P <.001; ** P <.01; * P <.05

TABLE A.6.3

CORRELATION MATRIX OF VARIABLES CONSIDERED IN THE MODEL OF FERTILITY FOR THE RURAL NON-ELITES, BANGLADESH 1975-76 (N= 4020)

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
X1	1.000	.778***	.686***	.001	.040**	-.106***	.253***	.306***	-.001	-.115***
X2		1.000	.504***	-.021	.068***	-.147***	.222***	.267***	-.014	-.313***
X3			1.000	-.011	.052***	-.095***	.140***	.183***	-.019	-.086***
X4				1.000	-.041**	-.009	-.012	-.011	.012	-.041**
X5					1.000	-.077***	.040**	.010	.000	.059***
X6						1.000	-.030*	-.047***	.068***	.182***
X7							1.000	-.432***	-.023	-.078***
X8								1.000	.030	-.044**
X9									1.000	.014
X10										1.000

Source: BFS data analyses.

Note: X1= Children Ever Born.
X2= Duration of Marriage.
X3= Child Mortality.
X4= Muslim Religiosity.
X5= Female Labour Force Participation.
X6= Female Education.
X7= Proportion of Daughters Ever Born.
X8= Proportion of Sons Ever Born.
X9= Female Childhood Place of Residence.
X10= Female Age at Marriage.

*** P <.001; ** P <.01; * P <.05

TABLE A.6.4

CORRELATION MATRIX OF VARIABLES CONSIDERED IN THE MODEL OF FERTILITY FOR THE RURAL SUB-ELITES, BANGLADESH 1975-76 (N= 632)

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
X1	1.000	.800***	.669***	.008	.021**	-.205***	.259***	.320***	-.031	-.195***
X2		1.000	.504***	-.047	.106**	-.277***	.161***	.290***	-.066	-.340***
X3			1.000	-.035	.028***	-.142***	.130***	.159***	-.018	-.129***
X4				1.000	-.043	.018	-.006	-.078*	.044	-.064
X5					1.000	-.006	.008	.013	-.035	-.069*
X6							-.030	-.083*	.183***	.210***
X7							1.000	-.396***	-.017	-.043
X8								1.000	-.055	-.097**
X9									1.000	.056
X10										1.000

Source: BFS data analyses.

Note: X1= Children Ever Born.
X2= Duration of Marriage.
X3= Child Mortality.
X4= Muslim Religiosity.
X5= Female Labour Force Participation.
X6= Female Education.
X7= Proportion of Daughters Ever Born.
X8= Proportion of Sons Ever Born.
X9= Female Childhood Place of Residence.
X10= Female Age at Marriage.

*** P <.001; ** P <.01; * P <.05

TABLE A.6.5

CORRELATION MATRIX OF VARIABLES CONSIDERED IN THE MODEL OF FERTILITY FOR THE RURAL ELITES, BANGLADESH 1975-76
(N= 104)

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
X1	1.000	.763***	.536***	.059	-.113	-.172*	.117	.320***	.161	-.143
X2		1.000	.415***	.010	-.136	-.359***	.096	.307***	022	-.307***
X3			1.000	.075	-.141	-.062	.004	.185*	-.143	-.034
X4				1.000	-.081	-.083	.044	.068	.002	.202*
X5					1.000	.372***	.019	.064	.199*	.378***
X6						1.000	.015	-.139	.268**	.508***
X7							1.000	-.551***	-.038**	-.059
X8								1.000	.145	-.006
X9									1.000	.228**
X10										1.000

Source: BFS data analyses.

Note: X1= Children Ever Born.
X2= Duration of Marriage.
X3= Child Mortality.
X4= Muslim Religiosity.
X5= Female Labour Force Participation.
X6= Female Education.
X7= Proportion of Daughters Ever Born.
X8= Proportion of Sons Ever Born.
X9= Female Childhood Place of Residence.
X10= Female Age at Marriage.

*** P <.001; ** P <.01; * P <.05

TABLE A.6.6

CORRELATION MATRIX OF VARIABLES CONSIDERED IN THE MODEL OF FERTILITY FOR THE URBAN NON-ELITES, BANGLADESH 1975-76 (N= 823)

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
X1	1.000	.742***	.650***	.041	-.002	-.121***	.180***	.249***	-.025	-.102*
X2		1.000	.466***	-.004	.050	-.175***	.138***	.179***	-.080*	-.301***
X3			1.000	.036	.087**	-.140***	.099**	.146***	-.033	-.055
X4				1.000	.067*	-022	.079*	-.035	.083**	-.092**
X5					1.000	-.089**	.013	.046	.052	-.152***
X6						1.000	-.006	-.022	.084**	.075*
X7							1.000	-.558***	.009	-.071*
X8								1.000	-.092**	-.053
X9									1.000	.106***
X10										1.000

Source: BFS data analyses.

Note: X1= Children Ever Born.
X2= Duration of Marriage.
X3= Child Mortality.
X4= Muslim Religiosity.
X5= Female Labour Force Participation.
X6= Female Education.
X7= Proportion of Daughters Ever Born.
X8= Proportion of Sons Ever Born.
X9= Female Childhood Place of Residence.
X10= Female Age at Marriage.

*** P <.001; ** P <.01; * P <.05

TABLE A.6.7

CORRELATION MATRIX OF VARIABLES CONSIDERED IN THE MODEL OF FERTILITY FOR THE URBAN SUB-ELITES, BANGLADESH 1975-76 (N= 303)

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
X1	1.000	.744***	.618***	-.135**	.004	-.289***	.331***	.236***	-.096*	-.175***
X2		1.000	.410***	-.181***	.102*	-.377***	.249***	.210***	-.060	-.305***
X3			1.000	-.034	.063	-.169**	.143**	.144**	-.057	-.109*
X4				1.000	.014	.037	-.080	-.081	.082	-.098*
X5					1.000	-.014	-.043	.107*	.014	-.076
X6						1.000	-.119*	-.165**	.115*	.254***
X7							1.000	-.404***	.037	.016
X8								1.000	-.064	-.116*
X9									1.000	.000
X10										1.000

Source: BFS data analyses.

Note: X1= Children Ever Born.
X2= Duration of Marriage.
X3= Child Mortality.
X4= Muslim Religiosity.
X5= Female Labour Force Participation.
X6= Female Education.
X7= Proportion of Daughters Ever Born.
X8= Proportion of Sons Ever Born.
X9= Female Childhood Place of Residence.
X10= Female Age at Marriage.

*** P <.001; ** P <.01; * P <.05

TABLE A.6.8

CORRELATION MATRIX OF VARIABLES CONSIDERED IN THE MODEL OF FERTILITY FOR THE URBAN ELITES, BANGLADESH 1975-76
(N= 216)

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
X1	1.000	.835***	.569***	.024	-.077	-.529***	.227***	.166**	-.221***	-.448***
X2		1.000	.465***	.005	.032	-.503***	.180**	.162**	-.235***	-.464***
X3			1.000	.012	-.073	-.316***	.042	.110	-.074	-.295***
X4				1.000	-.149*	.001	-.020	.026	.183**	-.196**
X5					1.000	.235***	-.041	.026	.046	.276***
X6						1.000	-.019	-.149*	.360***	.433***
X7							1.000	-.584***	-.014	-.092
X8								1.000	-.085	-.181**
X9									1.000	.326***
X10										1.000

Source: BFS data analyses.

Note: X1= Children Ever Born.
X2= Duration of Marriage.
X3= Child Mortality.
X4= Muslim Religiosity.
X5= Female Labour Force Participation.
X6= Female Education.
X7= Proportion of Daughters Ever Born.
X8= Proportion of Sons Ever Born.
X9= Female Childhood Place of Residence.
X10= Female Age at Marriage.

*** P <.001; ** P <.01; * P <.05

TABLE A.7.1

REGRESSION ANALYSIS OF CHILDREN EVER BORN FOR RURAL NON-ELITES, BANGLADESH 1975–76 (N = 3922)

Determinants	b	B	R-Square Change
Duration of Marriage	.01599*** (.00023)	.61475 (.00888)	.67525
Child Mortality	.82780*** (.01893)	.37900 (.00866)	.10554
Proportion of Daughters Ever Born	.58798*** (.07147)	.06261 (.00761)	.00366
Muslim Religiosity	.19275** (.06187)	.02309 (.00741)	.00054
Female Education	.03821* (.01756)	.01634 (.00751)	.00029
Female Labour Force Participation	-.12092 (.06561)	-.01372 (.00745)	.00019
Intercept (a)	-.12774 (.07257)		

Multiple R = .88627
R-Square = .78547
Adjusted R-Square = .78514
Standard Error = 1.41852

Source: BFS data analyses.
*** P <.001; ** P <.01; * P <.05

TABLE A.7.2

REGRESSION ANALYSIS OF CHILDREN EVER BORN FOR RURAL SUB-ELITES, BANGLADESH 1975-76 (N=620)

Determinants	b	B	R-Square Change
Duration of Marriage	.01708*** (.00057)	.65457 (.02210)	.71142
Child Mortality	.73262*** (.04892)	.31783 (.02122)	.07548
Proportion of Daughters Ever Born	.97177*** (.16737)	.10657 (.01836)	.01101
Muslim Religiosity	.32952** (.12683)	.04701 (.01809)	.00227
Female Education	.00742 (.02066)	.00675 (.01879)	.00004
Female Labour Force Participation	-.40063 (.31295)	-.02323 (.01814)	.00052
Intercept (a)	-.26942 (.16618)		

Multiple R= .89485
R-Square= .80075
Adjusted R-Square=.79880
Standard Error=1.33675

Source: BFS data analyses.
*** P <.001; ** P <.01; * P <.05

TABLE A.7.3

REGRESSION ANALYSIS OF CHILDREN EVER BORN FOR RURAL ELITES, BANGLADESH 1975-76
(N = 103)

Determinants	b	B	R-Square Change
Duration of Marriage	.01927*** (.00201)	.68655 (.07158)	.58174
Child Mortality	.88519*** (.23650)	.25150 (.06719)	.05820
Proportion of Daughters Ever Born	.40463 (.51852)	.04719 (.06047)	.00237
Muslim Religiosity	.26686 (.42212)	.03828 (.06055)	.00150
Female Education	.09675 (.06759)	.09960 (.06958)	.00716
Female Labour Force Participation	-.23346 (.78364)	-.01945 (.06528)	.00032
Intercept (a)	-.42984 (.65844)		

Multiple R = .80702
R-Square = .65129
Adjusted R-Square = .62972
Standard Error = 1.71129

Source: BFS data analyses.
*** P <.001; ** P <.01; * P <.05

TABLE A.7.4

REGRESSION ANALYSIS OF CHILDREN EVER BORN FOR URBAN NON-ELITES, BANGLADESH 1975-76 (N=806)

Determinants	b	B	R-Square Change
Duration of Marriage	.01638*** (.00055)	.62042 (.02088)	.63283
Child Mortality	.84353*** (.04736)	.36764 (.02064)	.10167
Proportion of Daughters Ever Born	.33992*** (.16093)	.03866 (.01830)	.00169
Muslim Religiosity	.27958 (.15158)	.03346 (.01814)	.00108
Female Education	.03076 (.03102)	.01822 (.01838)	.00032
Female Labour Force Participation	-.46493*** (.13149)	-.06433 (.01819)	.00393
Intercept (a)	-.05176 (.17243)		

Multiple R= .86112
R-Square= .74152
Adjusted R-Square=.73958
Standard Error=1.49375

Source: BFS data analyses.
*** P <.001; ** P <.01; * P <.05

TABLE A.7.5

REGRESSION ANALYSIS OF CHILDREN EVER BORN FOR URBAN SUB-ELITES, BANGLADESH 1975-76 (N=300)

Determinants	b	B	R-Square Change
Duration of Marriage	.01650*** (.00103)	.60058 (.03768)	.58335
Child Mortality	1.10160*** (.10419)	.35884 (.03394)	.11112
Proportion of Daughters Ever Born	1.51567*** (.32768)	.14785 (.03196)	.02174
Muslim Religiosity	-.01209 (.25716)	-.00148 (.03152)	.00000
Female Education	.03402 (.03509)	.03254 (.03356)	.00090
Female Labour Force Participation	-1.00364* (.41947)	-.07449 (.03113)	.00534
Intercept (a)	-.04283 (.35839)		

Multiple R= .84997
R-Square= .72245
Adjusted R-Square=.71675
Standard Error=1.70858

Source: BFS data analyses.
*** P <.001; ** P <.01; * P <.05

TABLE A.7.6

REGRESSION ANALYSIS OF CHILDREN EVER BORN FOR URBAN ELITES, BANGLADESH 1975-76
(N=211)

Determinants	b	B	R-Square Change
Duration of Marriage	.01755*** (.00109)	.66760 (.04148)	.72607
Child Mortality	.83353*** (.12515)	.24348 (.03656)	.04919
Proportion of Daughters Ever Born	.79530** (.28491)	.09114 (.03265)	.00829
Muslim Religiosity	.04942 (.25241)	.00633 (.03235)	.00004
Female Education	-.10162** (.03712)	-.10607 (.03874)	.00815
Female Labour Force Participation	-.23524 (.31218)	-.02544 (.03656)	.00064
Intercept (a)	1.23548** (.43246)		

Multiple R= .89016
R-Square= .79238
Adjusted R-Square=.78628
Standard Error=1.36026

Source: BFS data analyses.
*** P <.001; ** P <.01; * P <.05